



NORFOLK COUNTY COUNCIL

---

ANNUAL REPORT  
OF THE  
County Medical Officer  
FOR  
1930



# INDEX.

	PAGE
Area .....	3
Births .....	4
Blind Persons Act .....	86
Deaths :	
Rates .....	4
Causes of .....	5
Foods and Drugs .....	90
Hospital Services .....	10
Infantile Statistics .....	63
Infectious Diseases .....	92
Institutional Provision for Care of Mental Defectives .....	16
Laboratory .....	9
Local Government Act, 1929 .....	17
Maternity and Child Welfare :	
Area .....	59
Midwifery Service .....	59
Ophthalmia Neonatorum .....	61
Puerperal Fever .....	61
Abnormal Maternity Cases .....	62
Maternal Mortality .....	62
Infantile Mortality .....	62
Notification of Births .....	64
Health Visiting .....	65
Welfare Centres .....	65
Supply of Milk to Mothers and Young Children .....	68
Dental Treatment .....	69
Infant Life Protection .....	70
Maternity and Nursing Homes .....	70
Ministry of Health Inquiries .....	93
National Health Insurance .....	9
Nursing in the Home .....	9
Orthopaedic Treatment Scheme .....	47
Population .....	3
Sanitary Circumstances :	
Sanitary Districts .....	21
,, Inspectors .....	22
Water .....	23
Pollution of Rivers and Streams .....	28
Drainage and Sewerage .....	29
Scavenging .....	34
Milk .....	39
Housing .....	42
Staff .....	6
Statistics and Social Conditions .....	3
Tuberculosis .....	71
Venereal Diseases .....	89
Vital Statistics .....	4

## PREFACE.

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In this Report, which is the twenty-fourth of the series, the arrangement as set out in Circular 1119 of the Minister of Health has been followed as far as possible. An attempt has been made also, to give a brief survey of the County districts, together with a review of the various public health services of the County Council during the past five years. Considerable progress has been made; housing conditions improved, more parishes provided with district nurses, practically the whole County covered for health visiting purposes, dental treatment of necessitous expectant and nursing mothers extended, and it is worthy of note that the infant mortality rate is the lowest ever recorded in the County, viz.:—46.93 per 1,000 as against 60 for England and Wales.

Much, however, remains to be done.

T. RUDDOCK-WEST,  
*County Medical Officer.*

1ST SEPTEMBER, 1931.



## HOUSING TABLE.

The following Statement is compiled from the District Reports and indicates the general condition of Housing in 1930.

## NUMBER OF HOUSES ERECTED DURING THE YEAR—

HOUSES ERRECTED DURING THE YEAR—																																			
(a) Total (including numbers given separately under (b)) .....	25	82	12	15	33	37	36	106	72	6	22	42	37	64	155	117	20	14	44	36	975	9	27	3	5	3	12	—	5	32	2	82	1	181	1156
(I.) By the Local Authority .....	—	51	—	—	8	—	—	44	38	—	—	10	26	64	20	62	12	4	—	22	361	—	20	—	—	—	—	—	28	—	—	—	48	409	
(II.) By other Local Authorities .....	—	—	—	—	—	—	—	1	—	—	21	—	—	—	—	—	—	—	—	—	22	—	—	—	—	—	—	—	—	—	—	—	—	22	
(III.) By Other Bodies and Persons .....	—	31	12	15	25	—	4	57	34	5	1	32	11	—	135 <sup>d</sup>	55	8	10	—	14	449	9	7	—	5	3	12	—	5	4	2	20	1	68	517
(b) With State Assistance under the Housing Acts :																																			
(1) By the Local Authority.	15	51	—	—	—	21	30	44	38	—	—	10	26	64	20	62	12	4	30	22	449	—	20	—	—	—	—	—	28	—	62	—	110	559	
(a) For the purpose of Part II. of the Act, 1925	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(b) " " " " " III. " " 1925	—	51	—	—	—	—	30	44	—	—	—	—	—	64	20	—	—	—	—	22	231	—	20	—	—	—	—	—	28	—	—	—	48	279	
(c) " " other purposes .....	—	—	—	—	—	—	—	—	38	—	—	—	—	—	—	62	12	—	—	—	112	—	—	—	—	—	—	—	—	—	—	—	—	112	
(II.) By other Bodies or Persons .....	—	—	—	—	—	16	2	—	1	1	—	2	—	—	—	—	—	—	—	—	22	—	1	—	—	—	—	—	—	—	—	—	1	23	
(1) INSPECTION OF DWELLING-HOUSES DURING THE YEAR :																																			
(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts, ) and the number of inspections made .....	369 <sup>a</sup>	209 <sup>a</sup>	452	788	74	460	119	111	364	602	126	936	188	221	154	355	358	87	184	299	6456	44	450	80 <sup>a</sup>	—	51	36	143	130	60	68	153	93	1308	7764
(2) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925, and the number of inspections made .....	124 <sup>a</sup>	111 <sup>a</sup>	324	788	20	110	65	103	107	544	126	616	92	199	24	142	276	12	50	105	3938	5	150	4 <sup>a</sup>	—	19	36	42	130	14	31	88	54	573	4511
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .....	3	10	34	8	8	20	9	25	4	1	—	2	2	6	10	17	2	3	1	2	167	—	20	—	—	—	—	3	—	8 <sup>e</sup>	2	20	—	53	220
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation .....	10	85	111	101	32	64	30	67	28	186	—	352	60	47	48	37	102	8	140	72	150	—	60	—	—	4	5	1	17	—	16	68	28	199	1779
(2) REMEDY OF DEFECTS DURING THE YEAR WITHOUT SERVICE OF FORMAL NOTICES :—																																			
Number of defective dwelling-houses rendered reasonably fit in consequence of informal action by the Local Authority or their Officers .....	120	69	96	80	25	10	13	13	17	197	9	62	50	33	40	31	78	6	136	63	1148	5	152	24	—	8	5	68	17	5	6	61	26	377	1525
(3) ACTION UNDER STATUTORY POWERS DURING THE YEAR :—																																			
A. Proceedings under Section 3 of the Housing Act, 1925 :—																																			
(1) Number of dwelling-houses in respect of which notices were served requiring repairs .....	1	37	4	—	4	64	—	6	4	—	—	4	2	47	—	5	8	—	—	6	192	—	2	—	—	3	5	31	—	5	—	4	4	54	246
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—																																			
(a) By Owners .....	—	31	4	—	3	54	—	4	4	—	—	4	2	33	6	4	6	—	—	6	161	—	—	—	—	3	5	20	—	5	—	3	4	40	201
(b) By Local Authority in default of Owners .....	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—	—	—	—	3	—	—	—	1	—	6	7
(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of intention to close .....	—	1	—	—	—	24	—	—	—	—	—	2	—	4	—	—	2	—	—	—	33	—	—	—	—	—	—	—	—	—	—	—	—	—	33
B. Proceedings under Public Health Acts :																																			
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied .....	1	108	1	—	4	23	2	—	51	176	—	11	30	31	2	16	7	—	4	—	467	—	110	4	—	5	—	30	—	2	—	—	—	151	618
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—																																			
(a) By Owners .....	1	95	1	—	4	6	2	—	45	197	—	11	25	30	2	14	5	—	3	—	441	—	110	4	—	5	—	30	—	2	—	—	—	151	592
(b) By Local Authority in default of Owners .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
C. Proceedings under Section 11, 14 and 15 of the Housing Act, 1925 :																																			
(1) Number of representations made with a view to the making of Closing Orders .....	1	7	2	—	6	84	—	25	2	—	—	2	2	19	8	11	2	—	1	2	174	—	6	—	—	—	—	3	—	4	—	20	—	33	207
(2) Number of dwelling-houses in respect of which Closing Orders were made .....	—	7	2	—	8	23	—	2	1	—	—	2	2	7	8	11	2	—	1	2	78	—	6	—	—	—	—	3	—	4	—	7	—	20	98
(3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit .....	—	2	1	—	2	—	—	—	—	—	—	—	—	2	1	1	—	—	4	1	14	—	2	—	—	—	—	3	—	—	—	—	—	5	19
(4) Number of dwelling-houses in respect of which Demolition Orders were made .....	—	—	2	—	5	—	—	—	—	—	—	—	—	13	—	5	—	—	—	—	25	—	—	1	—	—	—	3	—	—	—	—	—	4	29
(5) Number of dwelling-houses demolished in pursuance of Demolition Orders .....	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	1	—	—	—	3	—	—	—	—	—	4	8
(6) .....																																			
(4) NUMBER OF HOUSES OWNED BY THE LOCAL AUTHORITY :																																			
(a) Total number .....	Not Given	452	151 <sup>b</sup>	90	120	239	209	254	195	Not Given	—	46	317	92	206	296	78	60	186	96	3087	—	44	Not given	28	12	10	36	20	28	85	229	122	614	3701
(b) Number built in the last two years and held under :—																																			
(1) Part III. of the Housing Act, 1925 .....	—	129	4	—	112 <sup>c</sup>	—	—	58	—	—	—	—	—	92	30	—	—	4	—	30	459	—	20	Not given	16	2	—	—	—	—	—	—	—	66	525
(2) Part II. " " " " 1925 .....	—	—	—	—	45	68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	113	—	—	—	—	—	—	—	—	—	—	—	—	—	113
(3) Other Powers .....	—	—	26	8	—	—	—	—	78	Not Given	—	14	92	—	—	112	24	—	84	—	438	—	—	Not given	—	—	—	—	—	—	—	—	—	—	554

a Excludes No. of Inspections.

b Includes 1 Army Hut.

c 28 of these built 1929-30.

d Includes 13 wood-framed buildings

e Temporary Dwelling (Railway Carriages).





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# ANNUAL REPORT

OF THE

## County Medical Officer 1930

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### STATISTICS AND SOCIAL CONDITIONS OF THE ADMINISTRATIVE COUNTY.

AREA .....	1,303,570 acres.
POPULATION—Census 1921 .....	322,932
Census 1931 .....	321,870
Estimated by Registrar General mid 1930 .....	321,300
NO. OF INHABITED HOUSES, 1921 .....	78,168
NO. OF FAMILIES OR SEPARATE OCCUPIERS, 1921 .....	78,814
RATEABLE VALUE, £1,110,818 (April 1st, 1930).	
PRODUCE OF PENNY RATE, 1930—31 :—	
General County Purposes, .....	£4319
Special County Purposes .....	£3942

### PHYSICAL FEATURES AND GENERAL CHARACTER OF THE AREA.

Norfolk is a maritime county with about 90 miles of coast, extending from Great Yarmouth on the East to Lincolnshire on the West. The administrative county is the fourth largest in England and the greater part is agricultural and sparsely populated. The largest town is the municipal borough of King's Lynn with a population of 20580. The next in size is East Dereham, with 5641 inhabitants.

There is a large sugar beet factory at Cantley on the River Yare, another at Wissington on the River Wissey, and a third at King's Lynn on the River Great Ouse. These provide seasonal occupation for many hands.

The main geological feature of the county is chalk. In the extreme West the rich alluvial soil has rendered this part an important fruit growing district.

The chief occupations are of an open air nature and have a beneficial effect upon the health of the community.

## VITAL STATISTICS.

### Births.

The live births registered during 1930 numbered 4922, of which 2436 were males, and 2846 females.

The number of illegitimate births reported is 30 lower than last year, viz. : 297, comprising 147 males and 150 females.

223 stillbirths were registered, which gives a rate of 45.31 per 1000 live births.

The following table shows the number of births registered and the birth rates during the past five years :—

Year.	URBAN.		RURAL.		ADM. COUNTY		Rate for England & Wales.
	Net. No.	Rate.	Net. No.	Rate.	Net No.	Rate	
1926	1026	16.73	4309	16.55	5335	16.58	17.8
1927	932	15.16	4140	15.10	5072	15.73	16.7
1928	967	15.75	4315	16.52	5282	16.37	16.7
1929	841	13.61	4126	15.78	4967	15.36	16.3
1930	873	14.32	4049	15.55	4922	15.32	16.3

### Deaths.

The number of deaths of civilians belonging to the county, after the allocation of transferable deaths, was 3,717, giving a net death-rate of 11.58 per thousand of the civil population.

The following table gives a comparison with the number of deaths and death-rates during the past five years :—

Year.	URBAN.		RURAL.		ADM. COUNTY.		Rate for England & Wales.
	No. of Deaths.	Rate.	No. of Deaths.	Rate.	No. of Deaths.	Rate.	
1926	726	11.84	3144	12.10	3870	12.04	11.6
1927	814	13.25	3295	12.64	4109	12.75	12.3
1928	787	12.85	3102	11.65	3889	12.07	11.7
1929	903	14.61	3433	13.14	4336	13.42	13.4
1930	668	10.96	3049	11.73	3717	11.58	11.4

A table giving the causes of death at specified ages will be found on page 91.

Number of women dying in, or in consequence of, childbirth :—

From Sepsis	.....	.....	.....	8
From other causes	.....	.....	.....	10
Total				18

Death-rate of infants under one year of age per 1,000 live births :—

Legitimate 43.07.      Illegitimate 63.30.      Total 46.93.

Deaths from Measles (all ages) : 12.

Deaths from Whooping Cough (all ages) : 13.

Deaths from Diarrhoea (under 2 years of age) : 17.

The following table gives the death-rates per 1,000 population from certain causes, together with the corresponding rates for the previous five years :—

<i>Disease.</i>	1930.	1929.	1928.	1927.	1926.
Cancer .....	1.68	1.67	1.76	1.64	1.54
Respiratory Diseases	1.09	1.46	1.07	1.45	1.44
*Zymotic Diseases	0.11	0.27	0.25	0.28	0.28
Tuberculosis					
(Pulmonary) .....	0.57	0.61	0.55	0.58	0.59
Tuberculosis					
(Non-Pulmonary)	0.16	0.15	0.19	0.17	0.16

\*Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Enteric Fever, Diarrhoea (Children under 2 years of age).



# GENERAL PROVISION OF HEALTH SERVICES IN THE AREA.

## PUBLIC HEALTH OFFICERS OF THE COUNTY COUNCIL.

### Whole-Time.

#### County Medical Officer :

T. RUDDOCK-WEST, M.D., B.S., D.P.H.

#### Deputy County Medical Officer :

KENWAY T. WILLIAMS, M.D., M.R.C.S., L.R.C.P.

#### Clinical Tuberculosis Officer :

W. B. CHRISTOPHERSON, M.R.C.S., L.R.C.P.

#### Assistant Clinical Tuberculosis Officer :

D. MORRISON SMITH, M.B., Ch.B.

E. HOLMES WATKINS, B.M., B.Ch.

#### Assistant Medical Officer :

N. CAMPBELL, M.B., C.M., D.P.H.

IRENE B. M. GREEN, M.B., B.S.

CHRISTINA LAMONT, M.B., Ch.B., D.P.H.

H. W. SEXTON, M.R.C.S.,

L.R.C.P.

#### Dental Surgeons :

J. G. AVENT, L.D.S. (resigned 12/7/30)

A. J. CAIRNS, L.D.S.

SADIE S. HOW, L.D.S.

P. MILLICAN, L.D.S.

J. NIXON, L.D.S.

A. A. SUMPTER, L.D.S.

A. L. WHITAKER, L.D.S. (appointed 21/7/30)

#### Inspector of Midwives and Superintendent Health Visitor :

Miss M. A. FOWLER, M.B.E., S.R.N., Cert. C.M.B., H.V. Cert.

#### Assistant Inspector :

Miss M. V. E. DAVEY, S.R.N., Cert. C.M.B., SAN. INSP. Cert.

#### Orthopædic Nurse :

Miss JOYCE E. KEMP, Cert. Society of Massage and Med : Gymnastics.

#### Health Visitors :

Mrs. B. A. BEGENT, S.R.N., Cert. C.M.B. (resigned Sept., 1930).

Miss E. F. INGLE, S.R.N., Cert. C.M.B. (temporary—appointed June, 1930).

\*Miss C. MCGREGOR, S.R.N., Cert. C.M.B. (temporary—appointed October, 1930).

Miss D. PARKER, S.R.N., Cert. C.M.B.

Miss O. M. PARKER, S.R.N., Cert. C.M.B., H.V. Cert.

†Miss A. ROSCOE, S.R.N., Cert. C.M.B. (temporary—appointed October, 1930).



### **Pupil Health Visitors :**

Miss E. A. JOHNSON, S.R.N., Cert. C.M.B.

College of Nursing Course—September, 1930, to March, 1931.

Miss E. F. INGLE, S.R.N., Cert. C.M.B.

Birmingham University Course—September, 1930, to March, 1931.

\* Appointed Assistant Inspector of Midwives January, 1931.

† Appointment terminated April 1931.

### **School Nurses :**

Miss E. B. BYGRAVE, Cert. Nurse

„ F. B. JUGGINS, S.R.N.

„ D. PERCIVAL, S.R.N.

„ D. VICKERS, S.R.N.

„ A. WELLSTED, Cert. Nurse

Miss A. HOLDEN, S.R.N.

„ F. M. MANN, S.R.N.,  
Cert. C.M.B.

„ C. SHINGLETON, S.R.N.

„ L. WALKER, S.R.N.

### **Home Teachers and Visitors under the Blind Persons Act :**

Miss A. E. PINNINGTON, Cert. College of Teachers of the Blind.

Miss M. D. RUSSELL, Cert. College of Teachers of the Blind.

### **Stanninghall Colony :**

*Matron* : Miss OFFORD, Cert. Nurse.

*Sister* : Miss WARD, A.R.R.C., Cert. Nurse.

*Steward* : W. H. S. MILES.

### **Clerical Staff :**

*Chief Clerk*—C. J. HUBBARD.

*Sectional Clerks* : G. E. MANTRIPP, A. R. PYE, H. E. WISEMAN,  
J. W. WOODCOCK.

*Clerks* : S. H. BISHOP, E. W. DURRANT, G. A. RABY, J. W. WEBB.

*Laboratory Assistant*—W. R. EMMS.

*Juniors* : A. J. ALLISON, A. ARMES, R. R. BALES, G. W. CURTIS,  
I. HOOK, W. R. HOWES, H. C. WEBB, D. WEEKS, P. WEEKS.

*Typists* : Miss B. DAVISON (*Senior*), Miss P. BECKWITH, Miss M. GREEN, Miss J. HAYHURST, Miss B. LYNES, Miss B. SMITH, Miss A. SPOONER, Miss E. WOODCOCK.

### **Part-Time.**

#### **Orthopaedic Surgeon :**

M. W. BULMAN, M.D., M.S., F.R.C.S.

#### **Consultants under Puerperal Fever Scheme :**

M. W. BULMAN, M.D. (Obstet.), M.S., F.R.C.S.

A. CROOK, M.R.C.S., L.R.C.P.

E. B. HINDE, M.B., B.Ch., F.R.C.S.E.

C. E. S. JACKSON, M.B., B.S., F.R.C.S.

C. NOON, O.B.E., F.R.C.S.

### **Ophthalmic Specialists :**

A. GREENE, M.D., F.R.C.S.I.  
G. MAXTED, M.D., F.R.C.S.  
S. T. PARKER, M.B., Ch.B., F.R.C.S.  
W. E. RUTLEDGE, L.R.C.S., L.R.C.P.  
W. WYLLYS, M.R.C.S., L.R.C.P.

### **Medical Officers Venereal Disease Clinics :**

NORWICH : S. H. LONG, M.D.  
T. J. WRIGHT, F.R.C.S.E. (Asst. M.O.).  
KING'S LYNN : J. W. MCINTOSH, M.B., Ch.B., B.Sc. (P.H.), F.R.C.S.E.  
PATHOLOGIST : G. P. C. CLARIDGE, M.B., B.S.

### **Assistant Bacteriologist :**

F. T. ALPE, F.C.S.

### **County Analyst :**

W. LINCOLNE SUTTON, F.I.C.

### **Inspectors under Food and Drugs Acts :**

W. B. BARRY.  
A. ROBINSON.

*(These Officers are also Inspectors of Weights and Measures).*

### **District Medical Officers under the Poor Law Acts :**

86 Medical Practitioners act as part-time Officers.

**Medical Officers of Institutions : 14.**

**Public Vaccinators : 85.**

**Vaccination Officers : 28.**

### **Milk and Dairies Acts :**

17 Veterinary Surgeons act as part-time Officers.

### **Dental Surgeons :**

14 act as part-time Officers under the Council's Dental Treatment Scheme for Expectant and Nursing Mothers.

### **Health Visitors :**

117 District Nurses act as part-time Health Visitors.

## NURSING IN THE HOME.

### (a) General.

Professional nursing in the home is provided by the District Nursing Associations, the majority of which are affiliated to the Norfolk Nursing Federation. The Federation is assisted by the following grants from the County Council, with whom close co-ordination is maintained.

2/- per annum for each case visited between birth and school age by the District Nurses acting as part-time Health Visitors.

£25 in aid of bonuses and long service for each nurse serving in the County.

£50 for the establishment of each new nursing association in the County.

A grant is also made towards the Federation's administrative expenses.

### (b) Infectious Diseases.

The nursing of patients suffering from infectious diseases is not undertaken by District Nursing Associations. No arrangements for this are made by the County Council, but certain District Councils engage nurses temporarily in necessitous cases which cannot be dealt with otherwise.

## NATIONAL HEALTH INSURANCE.

There are no important points in which the work of the County Council is related to, or administered in co-operation with, this service. It is worthy of mention, however, that under the National Health Insurance Scheme medical practitioners supply the County Medical Officer with periodical reports concerning insured tuberculous patients receiving domiciliary treatment. Also, at the request of the Regional Medical Officer of the Ministry of Health, the Council's Tuberculosis Officers furnish reports on cases in which the question of fitness for work has arisen.

## LABORATORY.

The County Laboratory was established in 1920 for the purpose of providing public health laboratory facilities, and is now equipped for modern requirements. As is essential, the Laboratory is always available for urgent work on Sundays and Public Holidays. The services rendered continue to be much appreciated. The following table indicates the work of the Laboratory during the past five years:—

	1926	1927	1928	1929	1930
Swabs for Diphtheria bacilli .....	543	854	2485	2574	2437
Sputum for Tubercle bacilli .....	1402	1253	1239	1181	1049
Urine for Tubercle bacilli .....	49	20	19	25	26
Blood for Widal .....	51	96	83	59	56
Urine various .....	63	28	20	19	23
Fæces for Typhoid .....	13	6	13	12	5
Fæces various .....	6	4	2	13	1
Blood counts .....	2	2	3	7	2
Swabs for organisms .....	7	3	—	—	23
Smears for G.C. ....	14	7	22	10	8
Pus for Tubercle bacilli .....	3	2	3	6	4
Hairs for Ringworm .....	7	11	3	3	7



	1926	1927	1928	1929	1930
Fluid for C.S.M. ....	2	—	5	8	—
Pleuritic Fluid ....	10	3	—	—	5
Milk for Tubercle bacilli ....	6	2	10	3	—
Milk for Diphtheria bacilli ....	1	—	—	—	—
Milk various ....	3	6	2	—	3
Specimens of Water ....	60	45	47	104	112
Vaccines prepared ....	21	17	11	4	4
Tuberculin Dilutions prepared ....	31	19	5	19	35
Tuberculin Ointment prepared ....	55	40	60	79	99
Miscellaneous specimens ....	30	19	19	24	33
Mussels for B. Coli ....	—	—	10	—	30
TOTALS	2379	2437	4061	4150	3962

Foodstuffs are examined by the Public Analyst who is a part-time Officer and has his own laboratory.

### Legislation in Force.

The County Council has promoted no Local Acts, Special Orders, or byelaws relating to Public Health for the area.

## HOSPITAL SERVICES AVAILABLE IN THE AREA.

### (a) Provided by the County Council.

#### ST. ANDREWS HOSPITAL FOR MENTAL CASES.

1,125 beds (494 males 631 females) equipped with 2 operating theatres; X-ray, dental and artificial light departments. Staff—Medical Superintendent, 1 Senior Assistant and 1 Junior Assistant Medical Officers. Visiting—1 Hon. Surgeon and 1 Hon. Physician.

#### PLUMSTEAD HALL FOR MENTAL DEFECTIVES.

70 beds for females (42 adults, 28 children). It is proposed to extend the accommodation to 300 beds with provision for extending to 500 if this should become necessary.

#### STANNINGHALL COLONY FOR TUBERCULOUS PATIENTS.

45 beds (males). An Assistant County Tuberculosis Officer acts as Medical Officer.

#### PUBLIC ASSISTANCE INSTITUTIONS.

The following Public Assistance Institutions have beds for the sick. The Institutions are all "mixed" ones and beds are not allocated except for males and females. The Medical Officers hold part-time appointments.

<i>Situate at</i>	<i>Beds for the Sick.</i>		
	<i>Males.</i>	<i>Females.</i>	<i>Children.</i>
Aylsham .....	53	53	2
Attleborough .....	27	33	—
Beckham West .....	18	32	1
Downham .....	27	26	—
Gayton .....	10	10	7
Gressingham .....	35	51	5
Heckingham .....	15	57	—

<i>Situate at</i>		<i>Beds for the Sick.</i>		
		<i>Males.</i>	<i>Females.</i>	<i>Children.</i>
King's Lynn	.....	39	64	12
Lingwood	.....	26	28	—
Pulham Market	.....	46	69	4
Snoring Gt.	.....	16	14	1
Swainsthorpe	.....	14	22	6
Thetford	.....	31	42	11
Wicklewood	.....	30	48	—
TOTALS		387	549	49

(b) **Provided by Local Sanitary Authorities**  
**(1) for Infectious Disease.**

*Authority. Hospital situated at No. of Beds.*

HOSPITALS IN ADMINISTRATIVE COUNTY : —

Cromer U.D.	.....	Roughton	.....	6
Sheringham U.D.	}	Roughton	.....	8
Nth. Walsham U.D.				
Erpingham R.D.				
Forehoe R.D.	.....	Wicklewood	.....	6
Hunstanton U.D.	.....	Hunstanton	.....	3
King's Lynn M.B.	.....	King's Lynn	.....	10

HOSPITALS OUTSIDE THE ADMINISTRATIVE COUNTY :—

*District served.*

Marshland R.D.	}	Wisbech	No definite allocation
Walsoken U.D.			
Loddon & Clavering R.D.		Oulton Broad	3-4 beds

(II) **Smallpox.**

*Authority. Hospital situated at No. of Beds accommodation for\**

King's Lynn M.B.	.....	King's Lynn	.....	9
Aylsham R.D.	.....	Aylsham	.....	1
Docking R.D.	}	Docking	.....	2
Walsingham R.D.				
Downham R.D.	}	Downham	.....	4
Downham U.D.				
East & West Flegg R.D.		Rollesby	.....	4—6
Freebridge Lynn R.D.	.....	Gayton	.....	2
Mitford & Launditch R.D.	}	Gressenhall	.....	4
East Dereham U.D.				
Smallburgh R.D.	.....	Wayford	.....	4
Swaffham R.D.	}	Swaffham	.....	4
Swaffham U.D.				
Thetford M.B.	}	Thetford	.....	2
Thetford R.D.				
Wayland R.D.	.....	Old Buckenham	.....	3
Diss U.D.	.....	Diss	.....	2—3
Cromer U.D.	}	These authorities have arranged to use one of the two Isolation Hospitals should a case of Small Pox arise in their area.		
Sheringham U.D.				
Nth. Walsham U.D.				
Erpingham R.D.				

\*All not actually equipped with beds.

(c) **Provided by Voluntary Agencies**

NORWICH :—Norfolk & Norwich General Hospital.

386 beds (162 males, 190 females, 34 children); 8 operating theatres; X-ray, Electrical Massage, Artificial Light, Ante-Natal; Dental; Aural; Ophthalmic and Pathological Departments; V.D. Clinic.

JENNY LIND HOSPITAL FOR CHILDREN.

80 beds; 2 operating theatres; X-ray; Electrical Massage; Artificial Light; Dental; and Aural Departments.

KING'S LYNN.

West Norfolk and King's Lynn General Hospital.

61 beds (26 males, 22 females, 12 children and 1 emergency); X-ray (examinations only), Dental, Ophthalmic, Massage and Electrical Departments, V.D. Clinic.

GT. YARMOUTH.

Great Yarmouth General Hospital.

72 beds (29 males, 29 females, 14 children). X-ray, Dental, Ophthalmic and Massage Departments.

CAMBRIDGE

Addenbrooke's General Hospital.

200 beds (81 males, 97 females and 22 children). X-ray, Dental, Ophthalmic, Massage, Artificial Light, Ear, Nose and Throat, Diseases of Women, Diseases of Skin. Departments and V.D. Clinic.

WISBECH.

North Cambridge General Hospital.

50 beds (18 males, 22 females and 10 children). X-ray, Dental, Ophthalmic, Massage and Artificial Light Departments (Percentage of patients from Norfolk: In-patients 28.18, out-patients 37.65).

CROMER.

Cromer Cottage Hospital.

30 beds (10 males, 12 females, 8 unallocated).

Operating Theatre, X-ray, Radiant Heat and Massage. Visiting Dentist.

DITCHINGHAM.

All Hallows Hospital.

20 beds, X-ray Equipment.

SWAFFHAM.

Cottage Hospital.

7 beds (3 males, 3 females, 1 accident).

Operating Theatre.



#### THETFORD.

Thetford Cottage Hospital.

6 beds (3 males, 3 females) 2 cots.

Operating Theatre, X-ray and Ultra Violet Ray Equipment.

#### NORTH WALSHAM.

North Walsham Cottage Hospital.

13 beds (5 males, 5 females, 1 emergency, 2 private).

Operating Theatre, X-ray Plant.

#### WATTON.

Victoria Cottage Hospital.

7 beds (2 males, 3 females, 2 children).

Operating Theatre.

#### WELLS-NEXT-SEA.

Cottage Hospital.

8 beds (3 males, 3 females, 2 children).

Operating Theatre. Visiting Dental Surgeon.

#### HOLT.

Kelling Sanatorium for Tuberculous patients.

115 beds (Males, X-ray and Artificial Light Departments).

Operative Surgery is done at the Cromer Cottage Hospital.

Bramblewood Sanatorium.

20 beds (females), X-ray work done at Kelling.

Operative Surgery is performed at Cromer or the Norfolk and Norwich Hospital.

Holt Children's Sanatorium.

48 beds. Dental treatment by Visiting Surgeon.

# ANALYSIS OF BEDS AVAILABLE.

Hospital	General Medical		General Surgical		Children	Maternity	Venereal Disease		Tuberculosis		Chronic Sick		Mental		Mental Deficiency		Orthopaedic	Ear, Nose & Throat	Puerperal Fever & Pyrexia	Ophthalmia Neonatorum	Other
	M.	F.	M.	F.			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.					
St. Andrews, Thorpe .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plumstead Hall .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stanninghall .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Aylsham Institution .....	—	—	—	—	—	—	—	—	45	—	—	—	—	—	—	—	—	—	—	—	—
Attleborough Institution .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beckham, West Institution .....	—	—	—	—	1	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Downham Institution .....	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gayton Institution .....	—	—	—	—	7	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gressenhall Institution .....	—	—	—	—	5	5	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Heckingham Institution .....	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
King's Lynn .....	—	—	—	—	12	3	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—
Lingwood .....	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulham Market Institution .....	—	—	—	—	4	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Snoring Gt. Institution .....	—	—	—	—	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Swainsthorpe Institution .....	—	—	—	—	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thetford Institution .....	—	—	—	—	11	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wicklewood Institution .....	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Norfolk & Norwich .....	28	28	107	128	29	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Jenny Lind Childrens .....	—	—	—	—	57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
West Norfolk & Lynn .....	3	3	23	19	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gt. Yarmouth .....	*	*	*	*	*	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Addenbrookes .....	27	27	46	50	22	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

# ANALYSIS OF BEDS AVAILABLE—continued.

Hospital	General Medical		General Surgical		Children	Maternity	Venereal Disease		Tuberculosis		Chronic Sick		Mental		Mental Deficiency		Orthopaedic	Ear, Nose & Throat	Puerperal Fever & Pyrexia	Ophthalmia Neonatorum	Other
	M.	F.	M.	F.			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.					
North Cambridge .....	18 M		22 F.		10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cromer Cottage .....	30				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ditchingham Cottage .....	20				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Swaffham Cottage .....	3 M.		3 F.		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Walsham Nth. Cottage .....	5 M.		5 F.		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Watton Cottage .....	1	2	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Wells Cottage .....	3	3	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kelling Sanatorium .....	—	—	—	—	—	—	—	—	115	—	—	—	—	—	—	—	—	—	—	—	—
Bramblewood .....	—	—	—	—	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—	—	—
Holt Childrens .....	—	—	—	—	—	—	—	—	48		—	—	—	—	—	—	—	—	—	—	—

\* No specified beds reserved but cases admitted as accommodation is available.



The hospital accommodation for medical and surgical cases available to residents in the Administrative County appears to be adequate except for cases of Surgical and Advanced Pulmonary Tuberculosis. Since the Stanninghall Colony was transferred from the Joint Committee to the County Council in October, 1930, a Committee has been considering the question of providing accommodation for these types of cases together with those suffering from Orthopaedic defects of a non-tuberculous character.

The Isolation accommodation in the Administrative County both for infectious diseases and smallpox is inadequate. The County Council has approved of the principle of a central hospital for infectious diseases for those areas with no adequate provision as outlined in the Annual Report for 1929, but in view of the financial stringency the Council in June 1931, adopted a recommendation of the Public Health and Assistance Committee that no further action should be taken at present.

### **Institutional provision for Unmarried Mothers, Illegitimate Infants<sup>s</sup> and Homeless Children.**

The County Council for several years has made a grant of £50 to the Norwich Diocesan Maternity Home. Six unmarried expectant mothers from the administrative County were admitted during 1930. Each case was delivered of a live baby. The average stay in the Institution of each of these cases was 36 weeks. Other cases usually go to the Public Assistance Institutions.

## **INSTITUTIONAL PROVISION FOR THE CARE OF MENTAL DEFECTIVES.**

### **List of Certified Institutions in the County.**

#### **LITTLE PLUMSTEAD INSTITUTION.**

Approved for reception of:

- (a) 14 cot and chair.
- (b) 28 medium to high grade females under 16 years of age.
- (c) 28 medium to high grade adult females.

### **Poor Law Institutions Certified under Section 37 of Mental Deficiency Act, 1913.**

#### **HECKINGHAM INSTITUTION.**

Approved for reception of:

42 adult female high and medium grade cases and 1 adult male.

#### **DEPWADE INSTITUTION.**

Approved for reception of:

12 adult female cases (high grade).

#### **WAYLAND INSTITUTION.**

Approved for reception of:

12 adult female cases (high grade).

In addition to the above, the County Council has approved a Scheme for the provision of a 300 bed Colony at Little Plumstead with service buildings for 500 patients.

Subject to the approval of the Board of Control it is also proposed to adapt the Heckingham Institution to accommodate 112 females and 56 adults.

### **Ambulance Facilities.**

#### **(a) Infectious Cases.**

The County Council has no ambulance.

The following Hospitals have ambulances for the removal of cases :  
Wisbech Hospital (serving Marshland R.D. and Walsoken U.D.)  
Thetford Hospital (serving Thetford M.B. and Thetford R.D.)

#### **(b) Non-infectious Accident Cases.**

The County Council has no ambulance but the Order of St. John of Jerusalem and the British Red Cross Society have ambulances stationed at the following places :—Attleborough, Cromer, Downham Market, East Dereham, Fakenham, Hunstanton, Norwich. There are also affiliated ambulances at King's Lynn, North Walsham and Norwich. During the year, 1913 cases were conveyed ; the total mileage being 320,280 miles.

## **LOCAL GOVERNMENT ACT, 1929**

### **ADMINISTRATION.**

On the passing of this Act, the County Council decided that as many of the duties of the Public Assistance Committee bore a direct relationship to the health of the community at large, the Public Health Committee with added members, should also function as the Public Assistance Committee. The new Committee is styled the "Public Health and Assistance Committee," and with the exception of School Medical Inspection and Treatment, and Mental Deficiency, all Committees dealing with health matters have become Sub-Committees as follows :—

General Public Health and Finance Sub-Committee.

Public Assistance Sub-Committee.

Maternity and Child Welfare Sub-Committee.

Tuberculosis Sub-Committee.

Blind Persons Sub-Committee.

Bills Sub-Committee.

No declaration has been made under Section V. of the Act as it was considered that many of the functions which were previously carried out under the Poor Law Acts could be referred to the appropriate Sub-Committee for necessary action. There are many obvious advantages in such arrangements and the scheme has worked extremely well. For instance, during the year it was decided that only in exceptional circumstances should relief be made to unemployable blind persons by the Guardians Committees, such cases being dealt with through the Blind Persons Act Sub-Committee. In the same way all grants of milk for necessitous Nursing and Expectant Mothers and children under five are made through the Maternity and Child Welfare Sub-Committee. Again, arrangements have been made whereby the County Medical Officer is authorised to utilise the Public Assistance Institutions for treatment of tuberculosis.



## INSTITUTIONS.

By the end of the year no Public Assistance Institution had been appropriated by the County Council for other purposes, but arrangements are on foot for the Heckingham Institution to be adapted and utilised for Mental Defectives.

Some while ago it was realised that additional accommodation would be necessary at the Mental Hospital unless other provision could be made for dealing with certain of the cases. On investigating the matter the Medical Superintendent came to the conclusion that there were a large number of cases of senile dementia which should not properly be in such an Institution. The Public Assistance Sub-Committee agreed to adapt the Swainsthorpe Institution to accommodate such cases, plans have been prepared and the estimated cost, which includes a sewerage scheme, installation of electric lighting, and extensive internal alterations, was found to be in the neighbourhood of £3,600. It was decided that one wing should be utilised immediately for this purpose and the other wing left free for alterations; when these are completed the patients will be transferred and the other wing adapted; the Institution will then be capable of accommodating between 150 and 200 patients and is eminently suitable for this purpose. The sexes can be easily separated, ambulant cases being housed on the ground floor and bed cases on the first floor. By these alterations accommodation will be provided at a cost of £3,600 for these patients, whereas if new buildings had been erected, the cost, at, say, £500 per bed, would have been at least £75,000. Of course, only the milder type of senile case is transferred, and in the event of their having been certified under the Lunacy Acts they are de-certified and sent on a month's trial. Each Public Assistance Institution in the County was circularised and asked to give a list of the cases of senile dementia, indicating those suitable for transfer to the Swainsthorpe Institution. When the alterations are completed it is anticipated that all such cases requiring institutional treatment will be treated here, with the exception of those who must necessarily be certified under the Lunacy Acts. In point of fact, although this institution is taking the senile cases, yet it is considered to be simply a home for aged and infirm persons. One assumes that it is the lot of man, if only he lives long enough, to become ultimately a senile dement. No casuals, of course, have been admitted to the institution since the new arrangements have been in operation.

## POOR LAW MEDICAL OUT-RELIEF.

Prior to the passing of the Act, there were 20 Unions concerned with the administration of the Poor Law, each Union comprising a Rural District, together with the associated Urban Districts. Marshland Rural District, however, sent their cases to the Wisbech Institution in the Isle of Ely, of which they were part owners, whilst West Suffolk, as part owners of the Thetford Institution, sent their cases there. Each Union, with the exception of Docking, St. Faith's, East and West Flegg, Marshland and Swaffham, had its own Poor Law Institution. On the transfer of the functions of Poor Law Authorities to the County Council, the County was divided into 13 areas for Public Assistance purposes. In certain cases it was found necessary to make adjustments in the areas of Relieving Officers and a few minor ones in the case of District Medical Officers. Beyond this and the filling of vacancies, there has been no change in the administration of out-door medical relief. The present areas are as follows :—



Area No.	No. of Districts.	Rural and Urban Districts in Area.	Population 1931 Census.	No. of District Medical Officers.	No. of Public Vaccinators.	No. of Public Assistance Institutions.
1	9	Erpingham Rural Cromer Urban Sheringham Urban	25,336	8	8	1
2	12	Aylsham Rural St. Faith's Rural	30,321	11	11	1
3	6	Blofield Rural E. & W. Fleggs Rural	24,566	6	6	1
4	5	North Walsham Urban Smallburgh Rural	18,115	5	5	—
5	9	Henstead Rural Forehoe Rural	23,677	8	8	2
6	4	Docking Rural Hunstanton Urban	19,414	4	4	—
7	6	Walsingham Rural Wells Urban	18,316	6	6	1
8	7	Freebridge Lynn Rural King's Lynn M.B. King's Lynn Rural	33,863	6	5	2
9	12	Downham Rural Marshland Rural Downham Urban Walsoken Urban	36,150	10	10	1
10	10	Mitford and Launditch Rural E. Dereham Urban	22,750	9	9	1
11	18	Swaffham Rural Thetford Rural Wayland Rural Swaffham Urban Thetford Municipal Borough	35,431	16	16	2
12	9	Depwade Rural Diss Urban	21,109	9	9	1
13	4	Loddon and Clavering Rural	11,822	4	4	1

### **Infectious Diseases.**

Under Section 63 of the Act a report was submitted to the Public Health Committee during 1929 concerning the Isolation Hospital accommodation in the County, full details of the survey and the scheme were provided in my Annual Report for 1929.

### **Medical Officers of Health.**

No action has yet been taken under Section 58 regarding the appointment of whole-time Medical Officers of Health, as it was felt desirable to defer this matter until the districts of the County had been revised under Section 46.

### **Transfer of Services.**

Under Section 61, in April 1930, the Minister of Health granted an order whereby the administration of the Notification of Births Acts was transferred from the District Councils which were not Maternity and Child Welfare Authorities, to the County Council; this left two districts which were not Elementary Education Authorities, viz. :—Swaffham Urban District and Forehoe Rural District, and in 1931, the Minister made a further Order transferring the Maternity and Child Welfare functions of these authorities to the County Council under Section 60. The County Council is now the Maternity and Child Welfare Authority for the whole of the Elementary Education Area of the Administrative County, the Borough of King's Lynn being a separate Elementary Education Authority.

# SANITARY CIRCUMSTANCES OF THE ADMINISTRATIVE COUNTY.

The report for this year is a survey one and deals with the various public health activities in the County during the past five years. In order to have a knowledge of the actual conditions existing in the County as a whole, I have during the past two years, visited and reported to the Public Health Committee upon the sanitary circumstances of each sanitary district in the area. While these reports have not been exhaustive in nature, sufficient time has been spent in each district to obtain a general knowledge of the conditions. Each report has been forwarded to the respective district councils for observations, and many of the defects to which attention was drawn have been remedied. I am indebted to the District Medical Officers of Health and Sanitary Inspectors for their co-operation in this work.

## Sanitary Districts.

<i>District.</i>	<i>Acreage.</i>	<i>Population Census 1931</i>	<i>Medical Officer of Health.</i>	<i>Sanitary Inspector.</i>
URBAN				
Cromer .....	1062	4177	Dr. R. C. M. Colvin-Smith	R. Croome
Diss .....	3674	3422	„ H. M. Speirs	G. H. Jones
Downham				
Market .....	1003	2463	„ J. Gibb	Vacant
East Dereham	5313	5641	„ N. E. D. Cartledge,	W. A. Norris
King's Lynn				
M.B. ....	3067	20580	„ J. W. McIntosh, B.Sc., (P.H.)	J. W. Shaw
New				
Hunstanton	1064	3131	„ W. E. H. Bull	F. Wilkinson
Nth. Walsham	4256	4137	„ J. Shephard	W. Morris
Sheringham	928	4141	„ J. E. Linnell, D.P.H.	F. Hall Smith
Swaffham .....	7592	2783	„ R. O. Townend	C. Frobisher
Thetford M.B.	7096	4097	„ A. Oliver, D.P.H.	L. G. Howell
Walsoken .....	4907	4058	„ H. L. Groom	T. M. Kerridge
Wells-next-Sea	2670	2505	„ G. Calthrop	F. Rodwell
RURAL				
Aylsham .....	69341	16210	„ H. H. Back	H. W. T. Trotter
Blofield .....	45783	14407	„ H. H. Back	L. F. Beckwith
Depwade .....	79742	17687	„ F. N. H. Maidment	F. H. Bowden
Docking .....	87386	16283	„ B. G. Sumpter	A. B. Nowell
Downham .....	85411	15501	„ J. Gibb	S. C. Rigg
E. & W. Flegg	28991	10159	„ W. Royden	A. Coulter
Erpingham.....	62167	17018	„ J. E. Linnell, D.P.H.	A. R. Tuddenham
Forehoe .....	38528	12899	„ A. P. Agnew	A. W. Hobbs
Freebridge				



<i>District.</i>	<i>Acreage.</i>	<i>Population Census 1931</i>	<i>Medical Officer of Health.</i>	<i>Sanitary Inspector.</i>
Lynn .....	75075	12352	„ O. L. Appleton	A. W. Plowright
Henstead .....	42380	10778	* „ R. F. Connell	J. B. Panks
King's Lynn	1638	931	„ T. O. Hutton	R. Walker
Loddon & Clavering	60273	11822	„ E. N. P. Martland	C. W. Pritchard
Marshland .....	51091	14128	„ S. R. Lister	J. T. Dewhurst
Mitford & Launditch	102371	17109	„ N. E. D. Cartledge	B. E. Penny
St. Faith's	48933	14111	„ S. H. Long	H. S. Hawkins
Smallburgh	62627	13978	„ B. D. Z. Wright	A. L. Taunton
Swaffham .....	74556	6766	„ E. F. Rose	W. H. Edwards
Thetford .....	95873	9636	„ G. Cowan	A. O Adcock
Walsingham	79996	15811	„ W. H. Fisher	W. H. Moffatt
Wayland .....	68774	13149	„ E. F. Rose	C. Whitworth

\* Resigned March 31st, 1931. Successor Dr. C. P. R. Gibson.

## DISTRICT MEDICAL OFFICERS OF HEALTH.

There are twenty-seven Medical Officers of Health for the thirty-two sanitary districts, two Medical Officers each being responsible for two rural districts, and three each having a rural district and urban district respectively. All the District Medical Officers of Health, with the exception of three who have retired, are engaged in active medical practice. Three hold the Diploma in Public Health, or its equivalent. Six hold temporary appointments.

The salaries vary from £20—£220 in the urban districts, the average being £70, and from £30—£160 in the rural districts with an average of £110.

Under Section 58 of the Local Government Act, 1929, it is the duty of the County Council, after consultation with the District Councils, to formulate arrangements for securing that every Medical Officer of Health subsequently appointed shall be restricted from engaging in private practice. In view, however, of Section 46 of the Act, which provides for the review of districts by the County Council, it was resolved that the question of a scheme for the appointment of whole-time Medical Officers of Health should be deferred until the revision of districts had been settled.

## SANITARY INSPECTORS.

There are thirty-two sanitary inspectors in the administrative county, each urban and rural district having its own inspector. With one exception all are whole-time officers. In the case of the urban districts many other duties are carried out, *e.g.*, Waterworks Manager, Road Surveyor, Market Inspector, Cemetery Superintendent, Fire Brigade Captain, etc. Even in the rural districts the duties vary considerably, in some cases the sanitary inspector being responsible for the collection of rents of Council houses, and in others for the designing of Council houses, etc.

The inspector in each of the twelve urban districts has an office provided by the Council, seven having a telephone or arrangements for such. In four cases clerical assistance is provided and in another case this is available when needed. In the rural districts nine sanitary inspectors have an office provided by the Council, in some cases consisting of a hut adjoining the inspector's house. Two have provided their own offices and nine have no office at all. In ten cases a telephone is provided or is available, two inspectors have been provided with clerical assistance, and two have this available when required.

In the urban districts the salaries apportioned to the duties of sanitary inspection vary from £100—£200, the average being £140, and in the rural districts from £12—£425 with an average of £250. Eight of these rural officers receive a separate allowance for travelling, and in nine cases this is included in salary. The remaining three have no travelling allowance whatever.

It would be more conducive to smooth working if every sanitary inspector had an office, telephone, and arrangements for clerical assistance, together with an adequate allowance for travelling.

## **WATER.**

The water supply of the County may be considered under the following headings :—

### **1. PIPED SUPPLIES.**

#### **King's Lynn Municipal Borough.**

The waterworks belonging to the Corporation are situated in the parish of Gayton, water being obtained from two deep wells in the chalk. Pumping is now done by an electric motor. It is estimated that the reservoirs contain a million and a quarter gallons of water. The County Analyst in May 1928 reported that the water was of excellent quality for drinking and domestic purposes.

#### **Thetford Municipal Borough.**

This is a Municipal supply and water is obtained in the town from a well sunk about 160 ft. deep in the chalk. Duplicate 25 h.p. engines are provided for the pump and they can both lift about 13,000 gallons per hour. The water is pumped to a reservoir holding approximately 250,000 gallons. The daily consumption is about 27 gallons per head and it is necessary to pump for about nine hours every day.

A yearly analysis is made. The 1930 report stated that the water was free from all trace of pollution.

#### **Cromer Urban District.**

The works, which belong to the District Council, are situated at Metton, water being obtained from a deep well, about 165 feet, sunk in the chalk. The reservoir at the Roman Camp, West Runton, holds just under 1,000,000 gallons. There are two engines capable of pumping 50,000 gallons and 40,000 gallons hourly respectively. In the Summer pumping is carried out for 11 hours daily and in the Winter 6 or 7 hours daily. The water is filtered before being supplied to the consumer.



### **Dereham Urban District.**

The works, which belong to the District Council, are situated in the town; water being obtained from a deep well, the bore hole of which is 311 feet deep. There are two engines and two pumps, softening chambers and storage tanks. The water tower over the bore hole contains a storage tank of 35,000 gallons. This storage capacity is only equivalent to half a day's consumption. The water from the well is very hard and is softened by lime. This treatment reduces the hardness from 17° to 11°. Approximately 70,000 gallons of water are used per day, which is the equivalent to 14 gallons per head, though the whole of the town does not use the piped water supply, some persons still preferring to use one of the various public pumps in the Town.

### **Diss Urban District.**

The waterworks belong to the Council and are situated in the town. They were erected between 1912 and 1913. Two wells have been sunk 250 feet in the chalk, which varies between 400 and 500 feet in thickness, above which are two strata of boulder clay, gravel and sand. Each well has a separate pump driven by an oil suction engine, in duplicate. The water is softened by a lime process to about 17° hardness. The capacity of the storage tank is 60,000 gallons which is barely equivalent to one day's supply. Practically all the houses in the district are connected to the mains, the few exceptions obtaining their water from shallow wells. No recent analysis has been made of this water.

### **Downham Market Urban District.**

A portion of the town is supplied by the Wisbech Waterworks Company.

### **Hunstanton Urban District.**

The District Council's waterworks are situated in the town. Water is obtained from an outcrop in the chalk; the overflow not utilised falls into a lake and ultimately discharges into the sea. The pumps are in duplicate and water is pumped to a water tower. The maximum quantity consumed is 200,000 gallons per day.

### **Sheringham Urban District.**

The waterworks are situated at Beeston and belong to a private Company. Water is obtained from natural springs in the chalk over a covering ground of about 16 acres and from two wells, one 18" and the other 10" bore, giving about 20,000 and 10,000 gallons per hour respectively. The water is filtered by upward and downward filtration, in one case through coke breeze and the other through stones. About 400,000 gallons are distributed daily during the Summer months. Systematic samples are taken, and the water is free from contamination.

### **Swaffham Urban District.**

The waterworks are in the urban district and belong to a private company. The supply is obtained from a well 200 ft. deep. The water is pumped to a tank which only holds approximately a third of a day's supply. I was informed that during the drought a scarcity of water was experienced, which necessitated the cutting off of the supply during certain hours of the day. As the bore is sunk in the same strata from which the Marham water is obtained, there should be a plentiful supply available. Possibly the bottom of the bore has in the course of time become more or less impervious owing to the formation of deposit. It has been suggested that the Company should have this investigated, and if this is the case to have an addit or addits cut so as to tap the water bearing strata in a new place.



### **North Walsham Urban District.**

The waterworks, which belong to the District Council are situated in the town. Water is pumped from a deep well into a storage tank having a capacity of 25,000 gallons which is approximately half a day's supply. The main pump which is generally in use, delivers 6,000 gallons per hour. A second pump, capable of delivering 2,000 gallons per hour is only used occasionally. There are two engines, an oil engine for the main pump and a steam engine for the auxiliary. The water is not softened and samples are not taken for systematic analysis. The County Analyst reported in October, 1912, that the water was quite fit for drinking and the general purposes of a public supply. 83 per cent. of the houses in the town are served.

### **Walsoken Urban District.**

Practically all the houses in the area are supplied by the Wisbech Water Works Company.

### **Wells Urban District.**

55 Council houses have a piped supply. The water is obtained from a shallow well in the chalk at the gas works and is pumped to a tank holding 1,000 gallons.

### **Erpingham Rural District.**

HOLT :—

The water supply at Holt is derived from a deep well in the chalk on Spouts Common. There are two engines and two pumps, and it is estimated that about 50,000 gallons of water are used daily. Storage is only provided for 15,000 gallons and if at any time the larger of the pumps should be out of action the smaller one would be incapable of supplying a sufficient amount of water for the Parish.

KELLING :—

In this parish a certain number of houses receive their water supply by means of stand pipes which derive their supply from a natural spring at the Hall.

MUNDESLEY :—

Water is pumped from a deep well near The Rookery Farm. There are two engines, and a filtration plant, together with a reservoir situated at Trimingham Beacon. In the season it is necessary to pump water more or less continuously during the day. Most of the houses in the parish are supplied.

East Runton, West Runton, Sidestrand, and Felbrigg are supplied by the Cromer Urban District Council, as are also a few houses at Aylmerton and Roughton.

### **Freebridge Lynn Rural District.**

The Royal Estate at Sandringham has a piped supply.

A portion of the parish of Gaywood is supplied by the King's Lynn Borough Council.

### **Blofield Rural District.**

A private company's water supply is piped from Brundall Gardens to various houses in Brundall West End.

### **Docking Rural District.**

#### **DOCKING.**

This parish was for many years known as "dry Docking," but towards the end of 1928 a pump house and tower were erected over a well 212 ft. deep, which was the gift of Kathleen Henley in 1760, and mains laid through the village; the works being opened in July, 1929. The pump house is equipped with two engines, one of which is kept as an auxiliary. A tank at the top of the tower has a capacity of 30,000 gallons. The flow is estimated at 500 gallons per hour, and normally the pump is only used on alternate days. Certain of the houses have had water laid on to the premises; the remainder are supplied by means of stand pipes, of which there are 37.

#### **HEACHAM.**

This parish obtains a bulk supply from the Hunstanton Urban District council, the water tower being situated just outside the town boundary.

### **Depwade Rural District.**

A small number of houses in the parish of Roydon are supplied by the Diss Urban District Council.

### **Loddon and Clavering Rural District.**

The railway cottages in the Parish of Haddiscoe in this rural district have a piped supply which is obtained from a well at St. Olaves Station belonging to the Railway Company.

Six houses near the Dam at Ditchingham have a piped supply from Bungay.

### **King's Lynn Rural District.**

The majority of the parish has a piped supply from King's Lynn.

### **Swaffham Rural District.**

Six houses at Shingham and two at Bury's Hall have a piped water supply from wells.

### **Walsingham Rural District.**

#### **FAKENHAM.**

Twenty-four Council Houses have a piped supply. A deep well has been sunk and the water is raised to a tank, standing on a girder framework, by means of a windmill pump.

#### **MELTON CONSTABLE.**

The majority of the houses in this parish have piped water, obtained chiefly from the Railway Company's private supply. Twenty Council houses are supplied similarly to those at Fakenham.

## **DISTRICTS AND PARISHES SERVED BY SUPPLIERS SITUATED OUTSIDE THE ADMINISTRATIVE COUNTY.**

### **Norwich Corporation Waterworks.**

These works are situated in the City of Norwich, water being obtained from the River Wensum. The intake is in the grounds of the waterworks. The following parishes are supplied:—

#### **Blofield Rural District:—**

Thorpe St. Andrew.



**St. Faith's Rural District :—**

Hellesdon.  
Catton.  
Sprowston.  
St. Faith's.

**Henstead Rural District :—**

Cringleford.  
Trowse Newton.

**Wisbech Waterworks Company.**

The waterworks are situated in the parish of Marham in the Downham Rural District. Water is obtained from springs in the chalk and collected in two wells, then pumped to the tower some 23 miles away ; three engines are working during the day and two during the night. In addition to supplying districts in the Isle of Ely, the following districts in Norfolk are supplied :—

**Downham Rural District :—**The parishes of :—

Bexwell.	Stow Bardolph.
Crimplesham.	Watlington.
Downham West.	Wiggenhall St. Germans.
Fincham	„ St. Mary Magdalen.
Marham.	„ St. Peter.
	„ St. Mary.

**Marshland Rural District :—**The parishes of :—

Emneth	Tilney St. Lawrence.
Outwell (most of).	Tilney-cum-Islington (part).
Upwell (part).	Walpole St. Peter (part).
Terrington St. John.	West Walton.
Detachments of Parishes known as the Smeeth area.	

**Yarmouth Waterworks.**

These are situated at Ormesby St. Michael, and the intake is from the River Bure at Horning. The following parishes in the East and West Flegg Rural District are supplied :—

**Caister.**—The majority of the houses in the village.

**Great and Little Ormesby.**—All the houses along the main road have a piped supply.

**II. OTHER SOURCES.**

**Wells Urban District.**

Apart from the 55 houses with a piped supply the remainder of the town draws its supply from some 350 shallow wells, which vary in depth from 16 to 45 feet, and the majority of which are liable to serious contamination. Some of the wells are in close proximity to the Cemetery, others to the sewers and catch-pits, whilst many are liable to pollution from street gullies.

These matters have been reported upon by the District Medical Officer of Health on many occasions. In 1921 he stated that he examined specimens from 12 different wells and in no case was one found to be completely pure.

Seven specimens were examined this year at the County Laboratory, and no sample was found to be fit for human consumption. Two of these wells



were opened up and cleaned out and the walls refaced, but in both cases subsequent samples were still unfit. In 1928 the District Medical Officer reported that for the last 15 years he and his Sanitary Inspector had pointed out the serious risk of pollution of these shallow wells in the closely confined and crowded yards such as existed in the Town. I am in absolute agreement with his remarks and hope that during the ensuing year the District Council will take steps to have the matter rectified.

In the remaining and largest portion of the County, water is obtained principally from wells. These are mainly shallow and therefore liable to pollution. In the Fen portions of Downham Rural District, Thetford Rural District and in Marshland Rural District, and in odd cases in a few other districts, rain or river water has to be relied upon.

### **New Water Schemes.**

During the year, two applications were received under Section 57 (1) of the Local Government Act, 1929, for assistance from the County Council towards expenditure which would be incurred in providing a piped water supply for the following places :—

**Wymondham.**—The estimated cost of the undertaking was £14,000. A Ministry of Health Enquiry was held in this connection on July 16th, 1930, and the Ministry's approval is only necessary before the work will be carried out.

**Wells.**—In this case the cost was estimated at £12,200. At the end of the year, however, no further steps had been taken in the matter.

It will be seen, that all the urban districts with the exception of Wells, have a piped water supply, but in most of them there are certain houses on the outskirts supplied by means of wells. It is anticipated that in time the service will be extended, and it would appear that many of the undertakings could supply water for considerably extended areas, as is done in the case of Cromer. In any case, when a district proposes to establish a piped water supply it would be an advantage to ascertain the practicability or otherwise of serving an extended area.

### **POLLUTION OF RIVERS AND STREAMS.**

Apart from the following cases, there have been no complaints as to pollution of rivers and streams.

#### **Gt. Ouse.**

There are two Sugar Beet Factories on the banks of this river, one at King's Lynn where the water is tidal and one at Ely in the area of the Isle of Ely County Council. In October, 1929, my attention was drawn by the Medical Officer of Health of the Downham Rural District, to the fact that a large number of dead fish had collected at the Denver Sluice. As in certain parts of this district river water is used for drinking purposes, I visited and took samples. These samples were found to be unsatisfactory and the matter was reported to the Public Health Committee. Authority was then given for legal proceedings to be taken. In the meantime, the Ouse and Cam Fishery Board instituted proceedings under the Salmon and Fresh Water Fisheries Acts against the Ely Sugar Beet Factory. As a result the Company installed Borsig and Pennel Wyllie purification plants. At the invitation of the Factory, representatives of the County Council inspected the new plants on completion. There have been no complaints since these were installed.

### **River Wissey.**

This tributary of the Gt. Ouse also has a sugar Beet Factory on its banks. The Fisheries Board took proceedings in this case, but as the Company admitted the offence only a nominal fine was imposed. The Company have since made further arrangements to improve the purification of the effluent.

### **Attleborough Stream.**

For many years complaints have been received concerning the state of this stream into which effluent from the cider works and a certain amount of sewage of the town discharges. I have visited this stream on several occasions and taken samples, as a result of which the matter was reported to the Public Health Committee and authority given to take proceedings if necessary. During the year the District Council obtained the advice of an engineer for providing a sewerage scheme for this parish. In view of the cost, however, the scheme had not been proceeded with by the end of the year.

### **River Bure.**

During the year a complaint was received from the Gt. Yarmouth Waterworks Company that a sewer at Coltishall discharged into the river and this might affect their intake at Horning. A number of samples taken above and below the outfall showed there was no appreciable difference in the water. Periodical samples will continue to be taken.

### **River Wensum.**

The Norwich Corporation, having complained to the St. Faith's Rural District Council that the cesspools belonging to certain houses in the Parish of Hellesdon, just outside the City Boundary, might have a deleterious effect upon the City water supply, samples were taken above and below the inlet of a dyke. These showed that there was no serious pollution at the present time. Periodical samples will continue to be taken.

## **DRAINAGE AND SEWERAGE.**

### **East Dereham Urban District.**

It is estimated that there are approximately 800 water closets, 880 pail closets, 20 privy vaults and 12 cesspools. At the sewage disposal works, the 18 inch sewer outfall discharges into catchpits with storm water overflows. The sewage passes over Dibden slate pits through settling chambers to filters with circulating arms. The effluent discharges into the stream. Farmers take the sludge for manure. On one occasion when visiting the neighbourhood, it was found that the storm water overflow was being used unnecessarily and the stream showed evidence of deposit on the banks and sides.

### **Diss Urban District.**

Practically the whole of the town with the exception of the East End and the extreme North is served by the Sewerage Scheme. The outfall passes under the river Waveney to a sewage farm of 5 acres, situated in Suffolk. The sewage is lifted by a Centrifugal pump driven by an oil engine and is treated on 16 beds. Sludge is purified by broad irrigation and disposed of to farmers. There is a storm water overflow to the river. A few properties not connected to the sewerage scheme are provided with septic tanks.



### **Downham Urban District.**

The majority of the houses in the district have water closets ; approximately 25 per cent. of these are provided with flushing apparatus, the remainder being hand flushed. The houses without water closets usually have vaults, but these are not permitted for new houses. The outfall of the sewer discharges into a receiving chamber at the pumping station, and from thence it is pumped by two rams to settling tanks and filter beds half-a-mile or so away. Two storm water overflows discharge direct into a ditch. The rams appear to be too small and as a consequence sewage has at times to be pumped into the storm water overflow. The ditch receiving effluent discharges into the river about three-quarters of a mile away. At the disposal works the sewage is received into a chamber, and thence flows into a circular settling tank. The effluent passes over a weir and discharges on to filter beds. The sludge should be syphoned into another circular tank, but on the occasion of my visit this was not functioning and this tank contained liquid sewage. The distributing arms of the filter were not circulating properly. On each visit the bottom of the ditch taking the storm water and the effluent from the filter beds was black with sewage deposit.

### **Hunstanton Urban District.**

The majority of the houses in the Town are connected to the sewer. There are two sewer outfalls ; the North Outfall consists of a double settling tank from which sewage is passed through a percolating filter by means of mechanical sprinklers and thence into a humus tank, before being ultimately discharged into the sea. The tanks are cleaned out once yearly. The plant at the Southern Outfall was reconstructed between 1925 and 1926 under a scheme approved by the Minister of Health, two detritus screening tanks, precipitation tanks in duplicate, and a storage tank capable of holding twice the amount of the dry weather flow of sewage being installed. Sewage is raised from the low lying parts of the town by means of compressed air ejectors, and the ultimate discharge to the sea through an outfall three-quarters of a mile long is by syphonic action. In addition, the sewage from a small number of houses drains into a septic tank and from thence discharges into the sea.

### **Cromer Urban District.**

There are only two houses in an isolated part of this district which are not connected with the sewerage scheme, and in the newer parts of the town the sewage is on a separate system, the drainage from the roads running into a small stream. The sewer discharges into septic tanks and thence by means of three outfalls into the sea.

### **North Walsham Urban District.**

At the end of the year, approximately half of the closets were of the water type, the remainder being pail closets with 20 fixed privies and 6 ash-pits. Originally the Town was sewered by means of a surface drain which gained access to the Town drain and ultimately discharged into the North Walsham and Dilham Canal. Many of the surface drains still remain, but carry mainly surface water with only a portion of liquid sewage. These are gradually being reduced in number. The sewage is brought into the treatment area at Spa Common through an inverted syphon, and passes by detritus chambers to sedimentation tanks of concrete provided with hand operating scrapers which force the sludge to the centre. The weight of the water drives part of the sludge, and the remainder is pumped to a distributing chamber and on to one of the four sludge lagoons. The liquid effluent from the tank passes into a dosing chamber and is then forced over filtering beds ; it then passes into humus tanks and discharges by an outlet pipe into the canal. Lava slag is used on the filter.



### **Sheringham Urban District.**

All the houses in Sheringham are connected to a Water Carriage system. The sewage, after passing through 1",  $\frac{1}{2}$ ", or  $\frac{1}{4}$ " screens, is discharged into the sea below the low water level and 1,000 feet from the promenade.

### **Swaffham Urban District.**

There is no record of the number of W.Cs., or pail closets in use; vaults number 71. Some W.Cs. deliver into cess pits which are emptied by the night soil cart.

There are 8 miles of sewers in the town, and as much of the system is old, it is necessary to employ men constantly in keeping them clear. The main sewer is 12" in diameter.

The disposal works occupy  $4\frac{1}{2}$  acres, situated about 2 miles from the town. They consist of an inspection chamber with storm water overflow, a dosing chamber and two settling tanks. The sludge is passed into lagoons where it is dried and afterwards taken by a farmer for manure. The effluent is irrigated over the land and finally runs into a small stream.

### **Walsoken Urban District.**

A water-borne sewerage system under the control of the Wisbech and Walsoken Main Sewerage Board serves about 700 houses in New Walsoken.

The sewers discharge into the Joint Main sewer and is conveyed to a sewage farm 5 miles from Wisbech where it is treated by broad irrigation.

Some properties, which are not connected to the sewerage scheme, are provided with septic tanks, whilst others have cesspools.

### **Wells Urban District.**

There are only a few W.Cs. in the district; these drain into cesspools which overflow into the drains.

The remainder are mainly pails, but there are some cemented boxes.

Practically all the sewers are built of brick and have catch-pits at various points which need cleaning out from time to time. Several of these catch-pits were opened for my inspection, and in most cases the brickwork was defective and the pits leaking. These pits are often quite close to houses, the drinking water of which is obtained from shallow wells, and must be grossly polluted. As very few houses in the congested area have sinks, sullage water is emptied into the street gullies. These gullies are usually situated close to the wells, and the risk of pollution of the water is obvious. Some fifteen sewers discharge untreated sewage into the Harbour at the Town Quay just over the mussel layings. Prior to being marketed these mussels are relaid higher up the Harbour on special lays for seven days. These lays are only covered for the last hour of each flowing tide with the result that owing to the heat killing them when exposed to the sun. This is a great handicap to the industry. If these sewers were diverted, the mussel industry might be considerably increased. I was informed that some oysters which had been sent down for trial had made remarkable progress. Here again the diversion of the sewers might assist in developing a remunerative industry.

### **King's Lynn Municipal Borough.**

Some of the sewage from the town passes untreated into streams known as "fleets," and is discharged into the sea by means of tidal gates according to the tides.

All houses have water closets except a few situated in outlying parts of the district. These latter, about 40 in number, are provided with pail closets.

## **Thetford Municipal Borough.**

Most parts of the Borough are served by a system of surface and slop water drains which discharge through five outfalls to the rivers. In two cases the outfall primarily discharges into a series of filter beds which are cleaned out approximately every fortnight. The outfalls and the beds of the rivers for some distance are cleaned out annually.

There are approximately 256 water closets, 496 pail closets and 478 privies in the area. When privies are in need of structural repair the Council insists on their conversion to pails.

The majority of the W.Cs are connected to septic tanks, the overflow from which is passed through a double filter chamber before being discharged to the main drain where this is available.

## **Blofield Rural District.**

A water-borne system has been installed in the parish of **Thorpe St. Andrew**. The sewers are connected to those of the Norwich Corporation and are dealt with by the disposal works of that Authority.

At **Brundall**, in the part known as the "West End," considerable building has taken place around the "Brundall Gardens." These houses all have cesspits. As they have a piped water supply baths and W.Cs. are fitted and the water consumption is high, with the consequent overflowing and soakage from cesspools. A sewerage system is urgently needed in this village in order to prevent the soil becoming nothing more or less than one huge cesspit. If it were <sup>not</sup> possible at first to cover the whole village, the "West End" portion could be dealt with as the configuration of the land gives a good fall.

## **Depwade Rural District.**

The disposal of sewage at **Harleston** leaves much to be desired. There is no main water supply. The sewer discharges sullage water and the contents of some 100 W.Cs. in a crude form, into the Beck near the gas works.

## **Erpingham Rural District.**

Sewage from **East Runton, West Runton, Mundesley and Overstrand** is discharged into the sea without being previously treated.

**Holt** has a sewerage scheme. The sewage is received in a detritus tank, the liquid from which is passed through two filter chambers and thence through two percolating filters. There is a storm water overflow. Storm water and the effluent are discharged into a field and eventually gain access to a stream. The effluent was dirty and the percolating filters appeared to need attention at the time of inspection.

The sludge is passed from the detritus tank to lagoons where it is dried and disposed of on the land.

## **East and West Flegg Rural District.**

**Caister** :—Three sets of sewers discharge into the Land Spring Dyke, which has little or no fall and is grossly polluted.

## **Forehoe Rural District.**

The following parishes have some system of sewerage :—

**Wymondham** :—Brick barrel sewers, some stone work pipes. No purification; open ditches with sewage ultimately gain access to River Tiffey.

**Hingham** :—Practically all brick barrel—effluent goes into open ditches with no purification.

The District Council has under consideration the provision of an adequate



sewerage scheme for Wymondham. Plans and specifications were prepared by a consulting engineer and an enquiry was held by the Ministry of Health on July 16th, 1930.

### **Henstead Rural District.**

**Trowse Newton** is the only parish in the district which has any sewerage scheme. This is a private sewer which ultimately discharges to the River Yare. Elsewhere, sullage water is either drained to cesspools and open ditches, or disposed of on the gardens.

### **Freebridge Lynn Rural District.**

The King's Lynn sewers are available for a part of **Gaywood**.

### **King's Lynn Rural District.**

74 houses on the East side of the River Ouse are connected up with the King's Lynn Corporation sewers. The whole area is drained. The majority of the houses have sinks and gullies for surface water, drainage ultimately gaining access to the River Ouse. The whole area is invested in a "Court of Sewers."

### **Walsingham Rural District.**

**Melton Constable** is sewered and has a Sewage Disposal Works. A scheme for the improvement of these works was commenced at the beginning of the year, and the work carried out by direct labour. Provision was made for the construction of a Storm Water Overflow, a Relief Sewer, and two additional Sludge Beds.

**Fakenham** is sewered, and the sewage is raised to a Sewage Farm of 18 acres and treated by broad irrigation. During the year the plant has been dismantled, thoroughly overhauled, and new parts fitted where necessary.

All the new Council houses are drained and the sewage disposed of by septic tank treatment and sub-irrigation filter.

At **Pudding Norton** a block of 22 houses built in pairs are provided with W.Cs. which drain to a septic tank. The sewage then passes to a filter bed composed of furnace hard-stuffs, the effluent discharging into a ditch running across a field to a main dyke. Near the outfall the ditch was covered with a thick foul scum.

The system was not functioning properly at the time of inspection, and it appears merely to be breaking up the solids. Complaints are often made of the smell arising from the ditch.

### **Wayland Rural District.**

**Attleborough.** Portions of Attleborough are sewered, the sewers having four outfalls, two on the Southern side discharging into the Attleborough Stream, and two on the Northern side which enter the Banister River.

The first of these discharging into the Attleborough Stream contains untreated sewage together with some effluent from a cider factory.

The other sewage effluent (Station Road, Connaught Road, and part of Exchange Street), consists of sullage and other water from the New North Road area.

The effluent discharging into the Banister River from Church Street, Queen's Road, and part of Exchange Street area on the North side consists of much excreta and is treated in a septic tank prior to entering the river.

The remaining Northern effluent, draining High Street, London Road, and Chapel Road consists mainly of sullage water and gains access into the Banister River untreated.



In addition, the Attleborough Stream, when passing through the grounds of the Cider Factory, receives the main trade waste effluent.

During the year a detailed scheme for sewerage and Sewage Disposal Works for the town were prepared by Mr. A. J. Martin, M.I.C.E., at an estimated cost of £30,000. The Council intended applying for a Grant from the Unemployment Grants Committee towards the cost of the work. An application was made to the Norfolk County Council for a Grant under the Local Government Act, 1929. The Parish Councils and Parish Meetings in the District were circularised asking if they were willing for the District Council to bear part of the cost out of the General Rate, but the replies received were against the proposal with the exception of two which were in favour. Unfortunately the town decided that the scheme was too costly and the matter is therefore in abeyance.

**Watton.** Sewers from the town discharge into two tanks near the Gas works. The sewage is then piped to another tank in Saham Road, and the effluent passes by ditch to the River.

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Many parishes have village drains which receive mainly surface and sullage water. Houses in semi-urban portions of various areas have W.Cs. which discharge into Cesspools. In the remainder of the County pail closets, privies or vaults are used and the night soil is dug into the land whilst sullage water is disposed on the gardens, etc. In most districts privies or vaults are not permitted for new houses.

## **SCAVENGING.**

### **East Dereham Urban District.**

Refuse is collected weekly in the Urban part of the district. In cottage property where the assessment does not exceed £8 per annum the District Council provides sanitary bins. Pail closets are emptied weekly. House refuse is dumped and the dump is always burning. The scavenging is supervised by the Sanitary Inspector.

### **Diss Urban District.**

Under the supervision of the Sanitary Inspector arrangements are made by contract for the removal and disposal of the contents of vaults, pail closets, cesspools, fixed and removable dust bins.

### **Downham Urban District.**

The scavenging scheme provides for the removal of house refuse only and is carried out by contract.

### **Hunstanton Urban District.**

A weekly collection of refuse is made at the expense of the Council. All combustible rubbish is burnt in an incinerator, the resulting clinker being used in making up paths. A further three acres of land has recently been purchased for use in this connection. Before the incineration takes place bottles and tins are separated. Bottles are disposed of. Tins are collected and periodically rolled out by means of a steam roller before being supplied to farmers for making up hollows on their land.

It is worthy of note that it was originally intended to drive the pumps at the waterworks from steam generated by the incinerator. This idea however proved impracticable.

### **Cromer Urban District.**

Household refuse is collected bi-weekly and carted to the disposal ground ; a brick destructor was erected about 20 years ago at a very small cost. Clinker is used for roads and filling in hollows, etc.

### **Sheringham Urban District.**

Refuse is taken by horse drawn waggons to land near the Golf Links belonging to a market gardener. Paper is extracted and burnt, the remaining refuse being disposed of by a system of controlled tipping. No nuisance is created and the scheme may be said to be eminently satisfactory. No charge is made for collecting shop refuse. The Sanitary Inspector supervises the work.

### **Swaffham Urban District.**

The collection of refuse is done by employees of the District Council, covered carts being used for the purpose. Owners are required to provide covered Sanitary bins. Ashbins and pail closets are emptied weekly ; vaults and cesspools quarterly or half yearly. The scavenging is supervised by the Sanitary Inspector.

### **North Walsham Urban District.**

Day and night refuse is collected in covered carts by employees of the Council.

Day refuse is collected and disposed of at the rate of 12 loads weekly on the controlled tipping system. Night soil is removed five nights weekly, about 10 loads per week being disposed of. Pails are emptied weekly in houses with four occupants or less, and twice weekly when the number of inhabitants exceeds this.

A marshy piece of ground is used as a dump for day refuse. The deposit is covered over with earth daily. Night soil is trenched in daily in a field about half a mile from the Town. Scavenging is supervised by the Sanitary Inspector.

### **Walsoken Urban District.**

The Urban District Council collects house refuse twice weekly except in the outlying parts, and this is dumped on the land of a farmer who separates tins and glass from the refuse and buries the residue in clay soil in the winter months.

Some inexpensive method of incineration for the paper would be an improvement and would reduce the bulk of refuse to be disposed of. The collection is supervised by the Sanitary Inspector.

### **Wells Urban District.**

The Council has a sanitary scheme under which a bi-weekly collection is made. Pails are emptied by night scavengers and the night soil disposed of to farmers for manure. Tins are carted to a refuse dump and partially covered. The scavenging work is supervised by the Sanitary Inspector.

### **King's Lynn Municipal Borough.**

House refuse is collected once a week and dumped just outside the borough boundary. Two covered motor waggons and six horse drawn carts are utilised for this purpose, and a system of controlled tipping has been adopted. A small brick incinerator is used for paper and other burnable matter. The scavengers' work is supervised by the Borough Surveyor.



## **Thetford Municipal Borough.**

The scavenging operations in the area are divided into three classes, one gang of men being concerned with the removal of household refuse, another with the emptying of cesspools and vaults, while the third gang is responsible for the disposal of the contents of pail closets.

The house refuse is disposed of by crude tipping on two dumps, one situated on Melford Common, and the other near the Public Assistance Institution. The first named is too near the houses, while the other dumping ground is almost exhausted. Great improvement would be effected if a suitable site were found and either a destructor erected or a system of controlled tipping put into operation.

The Town Council has an excellent scheme for the removal of night soil, which is the only one of its type in the County. A pail of the " Rochdale " type is originally provided by the owners of the premises covered by the scheme. Renewals and repairs where necessary are borne by the Council.

The pails are collected weekly from the houses at night time and a clean pail is left in place of the one removed. A horse drawn float capable of taking 24 pails at a time is utilised for this purpose.

On arrival at the dump, the contents of the pails are emptied into trenches. The pails are deposited in a shed built of corrugated iron with a concrete floor. On the following morning, after being washed and disinfected, they are ready for delivery the same evening.

The pits and trenches are covered over from time to time. Despite these precautions, at the time of inspection, an objectional odour was perceptible. This could be overcome to a large extent if the methods of field sanitation were adopted.

## **Aylsham Rural District.**

Scavenging schemes are in force at Aylsham, Hackford, Coltishall and part of Gt. Hautbois. The work is done by contractors under the supervision of the Sanitary Inspector.

## **Blofield Rural District.**

The following parishes have scavenging schemes which are worked under the direction of a Parochial Committee :—

Thorpe St. Andrew.

Blofield.

Reedham. (Pail closets only).

It appears that scavenging schemes should be instituted at Brundall and Acle.

## **Depwade Rural District.**

The Harleston Parish Council has a scavenging scheme covering Harleston and a part of Redenhall, which is operated under the supervision of the Sanitary Inspector.

## **Docking Rural District.**

In the villages of Docking, Burnham Market, Heacham and Ringstead, scavenging is carried out under the supervision of the respective Parochial Committees. Pails are emptied twice weekly and vaults and cesspools as needed, but at least once every six months. Household refuse is removed weekly.

In the village of Syderstone there are a number of houses with insufficient garden space for the disposal of refuse and night soil. The Parish Council has recently arranged for land to be available where rubbish may be dumped. There appears to be a need in this parish for a proper scavenging scheme.



### **Downham Rural District.**

West Downham and Fincham have a scavenging scheme for the removal of night soil, whilst at Hilgay the scavenging scheme includes refuse as well; the work is done by contractors under the supervision of the Sanitary Inspector.

### **Erpingham Rural District.**

East Runton, West Runton, Cley, Holt, Mundesley and Overstrand have scavenging schemes for house refuse only, while Briston has a scheme for the collection of night soil only.

At Mundesley the refuse is supposed to be incinerated, but the incinerator appears to be out of order and the refuse merely crudely tipped and set fire to. The greater part of the refuse is unburnt, and much is scattered about the field. The Overstrand dump is in a similar condition and the refuse is not incinerated.

The dumps at Mundesley and Overstrand both left much to be desired at the time of inspection.

### **St. Faith's Rural District.**

Scavenging is carried out by contractors under the Sanitary Inspector's supervision in the parishes of Sprowston, Catton, Hellesdon and Great Witchingham. It would be advantageous if such an arrangement were instituted at Wroxham, where a voluntary scheme is in force for the benefit of those people who choose to make use of it. Certain parts of the parish of St. Faith's also need a scavenging scheme on account of the general lack of ground space available for many of the houses in the parish.

### **East and West Flegg Rural District.**

Caister is the only village in the district which has a scavenging scheme. The work of the scavenger is supervised by the Parish Council. The dump is situated on the marshes off the road to West Caister. The night soil is eventually taken by farmers for manure. The refuse is not covered over and there was a certain amount of disagreeable smell on the day of the visit.

At Winterton, many houses have insufficient ground for the disposal of this refuse, and a scavenging scheme appears to be necessary.

### **Forehoe Rural District.**

Contractors undertake the work in Wymondham and Hingham under the supervision of the Sanitary Inspector. Many houses in Costessey (apart from New Costessey), have insufficient garden space for the disposal of night soil and house refuse. A scavenging scheme for this part of the parish appears to be urgently needed.

At Easton there is a row of seven cottages, six of which are occupied. These have no gardens at the back and only a very limited amount in the front. The tenants deposit their night soil on a field on the other side of the main road. The contents of the pails do not appear to be dug in, but merely emptied on the ground.

Unless gardens can be provided some systematic arrangement for the collection and disposal of night soil is necessary.

### **Henstead Rural District.**

With the exception of Trowse Newton, where the scheme is operated by private enterprise, no parish in the district has any arrangement for scavenging.

### **Loddon and Clavering Rural District.**

At Loddon, a scavenging scheme, operated under contract by a farmer, who takes the refuse on to his own land, covers the Town proper. The Sanitary Inspector supervises this work.

### **Freebridge Lynn Rural District.**

The district has established scavenging schemes in the parishes of Gaywood, Castle Acre and Gt. Massingham. Pails are emptied and house refuse is removed weekly, vaults being dealt with as required. The Sanitary Inspector supervises the scavenging arrangements. At Gaywood and Castle Acre a part-time Superintendent Scavenger is also employed.

The household refuse and night soil from that part of Gaywood situated in the Rural District is collected by the scavenger and carted to a dump on the outskirts of the parish.

### **King's Lynn Rural District.**

A scavenging scheme for the collection of household refuse only is in operation throughout the district. Refuse is collected fortnightly by a contractor, under the supervision of the Sanitary Inspector.

### **Marshland Rural District.**

There is no arrangement for scavenging in any part of the District, but schemes for the parishes of Outwell and Terrington St. Clement are under consideration.

### **Mitford and Launditch Rural District.**

This is undertaken in Shipdham, Lyng, and Litcham, the work being done by contract under the supervision of the Sanitary Inspector. The scavenger also empties cesspools as required.

### **Smallburgh Rural District.**

At Hoveton St. John the scavenging contractor for Wroxham also undertakes the scavenging by private arrangement.

In all other parishes the occupants of houses have to dispose of their own refuse.

### **Swaffham Rural District.**

The number of pail closets and privy vaults is not available, but the Sanitary Inspector estimated that they were approximately equal in number.

There is no scavenging scheme in any parish, and occupiers have to dispose of the house refuse and night soil. In several villages houses have insufficient ground to permit of such disposal.

Scavenging schemes are needed at Ashill, Saham Toney, Sporle and Narborough.

It would also be beneficial if the vault closets in Ashill were converted into pail closets.

### **Thetford Rural District.**

No scavenging scheme is in force in the area, the disposal of refuse being left to the individual occupiers who, in many cases, have insufficient land to permit of the efficient disposal of such refuse.

### **Walsingham Rural District.**

Scavenging schemes are in operation at Fakenham, Melton Constable, Little Walsingham, Blakeney, Stiffkey, Gt. Ryburgh and Hempton. The work is done by contractors under the supervision of the Sanitary Inspector.

In other parishes occupiers are responsible for the disposal of their own house refuse and night soil.

### **Wayland Rural District.**

There is no complete scavenging scheme in the district, the one operating in Attleborough only dealing with the collection of night soil. This scheme should be extended to include the collection of house refuse as there are many houses with gardens too small to dispose of this. A scavenging scheme is also needed at Watton.



## PUBLIC ELEMENTARY SCHOOLS.

### (a) Water Supply.

In very few cases are the Elementary Schools in the County connected to a Main Water Supply, this, of course, being mainly confined to the Urban Districts. The majority of Schools have wells on the premises but where this is not the case water for drinking purposes is obtained by arrangement from neighbouring wells.

The Assistant Medical Officers when at the Schools report on the hygienic and sanitary conditions and any matters requiring attention are referred to the Education Committee.

### (b) Infectious Diseases.

In connection with outbreaks of infectious disease it is the duty of the Head Teachers to send immediate notifications on an approved form simultaneously to the District Medical Officer of Health and the School Medical Officer in respect of any child suspected or known to be suffering from or in contact with any disease of an infectious nature. Close co-operation is maintained with the respective District Medical Officers of Health.

## MILK.

In the administrative County there are approximately 3,200 premises registered for the production and retailing of milk. In many cases the same individual is recorded more than once, and it would be reasonable to assume that roughly 2,800 persons are directly concerned in milk production. Of these, three are licensed for Certified Milk, two for Grade A "T.T.", and three for Grade A, under the Milk (Special Designations) Order, 1923. A large amount of milk produced in the County is consigned to London, Norwich, and certain other large towns outside the area.

It is obvious that all milk should attain a reasonable standard of cleanliness and be free from pathogenic organisms, among which may be mentioned the tubercle bacillus. It should also comply with the legal requirements regarding its constituents, viz. : 3% fats and 8.5% total solids non-fats.

How are these requirements being fulfilled? The producers of licensed milks must conform to the following standards :—

	<i>Bacteria per c.c. not to exceed</i>	<i>B. Coli to be absent in</i>	
Certified .....	30,000	1/10 c.c.	} Must not at any stage be treated by heat.
Grade A "T.T." .....	200,000	1/100 c.c.	
Grade A .....	200,000	1/100 c.c.	
Pasteurised .....	100,000	—	

The herds of the first two categories must be examined by a veterinary surgeon and submitted to the tuberculin test every six months. Animals re-acting to the tuberculin test must be separated from the remainder of the herd and their milk not sold as milk from the herd. Grade A herds must be examined by a veterinary surgeon at three-monthly intervals. The County Council has delegated the duties of supervision in this respect to the District Councils.

The legal requirements *re* constituents are enforced by the Inspectors under the Food and Drugs Acts, who take samples for analysis by the Public Analyst, followed by legal proceedings when required.



A number of farms in the County have excellent equipment and produce clean milk—in fact, some of them appear to be ideal. In many cases, however, there is scope for more care and attention with regard to cleanliness in methods. Clean milk can be produced without incurring heavy expenditure but it is essential that the cows and the milkers should be healthy and the cowsheds and utensils such as to be easily cleaned. An abundant supply of wholesome water and some means of sterilisation should be available; added to this, cleanliness first and last must be the keyword.

Sterilisation can easily be carried out in the smaller farms in the lines suggested by Mr. Anderson, Dairying Inspector of the Ministry of Agriculture, which consists of the adaptation of an ordinary copper. In the larger farms, however, a more elaborate plant would be necessary and in the majority of cases this is provided.

Apart from licensed milks, there is no legal standard for cleanliness and absence of pathogenic organisms. The Milk and Dairies Acts and Orders lay down certain regulations concerning the production of milk, but this legislation is by no means rigidly enforced.

The Clean Milk Competitions inaugurated in 1928 by the Norfolk Milk Recording Society, and now taken over by the Norfolk Agricultural Committee, have done excellent work and have been valuable in demonstrating locally the fact that clean milk can be produced by any farmer who is prepared to give the necessary care and attention to his methods. It is worthy of note that in the first of these competitions 67% of the samples reached the standard required for Grade A milk. Mention must also be made of the Agricultural Committee's Scheme for a County Register of Accredited Milk Producers. Samples are taken from time to time and must attain a certain standard of cleanliness before a producer is eligible for registration.

Recently arrangements have been made whereby on request of a District Medical Officer of Health or Sanitary Inspector, samples can be examined for cleanliness at the County Laboratory free of charge.

In order to determine the presence of tubercle bacilli it is necessary to have the milk examined microscopically, and if negative submitted to the biological test, *i.e.*, injection into healthy guinea pigs which are killed after 4—6 weeks and examined for the presence of tuberculous lesions. If positive, then it is presumed that the milk contained living tubercle bacilli. Under the Milk and Dairies (Consolidation) Act, 1915, the County Medical Officer may recommend the Council to issue an Order stopping the supply from any farm in the area where he is of opinion that tuberculosis is likely to be caused by the milk being sold for human consumption. On receiving complaint from other Medical Officers of Health that tubercle bacilli have been found in milk supplied from the County, arrangements are made for the farm to be visited, the herd examined by a veterinary surgeon and samples taken. In the smaller farms a separate sample is taken from each cow, but in the larger ones group sampling is resorted to. In the event of a group being positive separate samples are then taken from each animal in the group. Diseased animals discovered in this way are slaughtered under the Tuberculosis Order, 1925.

There is no doubt that much disease has been disseminated by the use of infected milk, and it is acknowledged that a large number of the cases of surgical tuberculosis (*i.e.*, glands, bones, joints, etc.) can be directly ascribed



of the consumption of milk containing living tubercle bacilli. I do not wish to appear to be stressing unduly the question of tuberculous milk, but it is worthy of note that a recent memorandum of the Ministry of Health on " Bovine Tuberculosis in Man " states that more than a thousand children under fifteen years of age die annually in England and Wales from infection of this origin.

In addition to these deaths there are many thousands of cases of crippling occurring each year. This is a matter of the utmost importance from a public health point of view, and if it were possible to secure a tubercle-free milk supply there would undoubtedly be a reduction in the incidence of this disease. It is difficult to suggest, however, in what manner this ideal can be attained. Obviously, if all the tuberculous cows were slaughtered and stock raised only from healthy animals it would be possible to produce tubercle-free milk. I am afraid this presents too great a problem to be worthy of consideration. There is, of course, the method advocated by Bang whereby all animals re-acting to the tuberculin test are not utilised for breeding, nor is their milk used for human consumption.

Under existing conditions there are three methods whereby a reasonable degree of cleanliness and freedom from pathogenic organisms might be obtained :—

1. **By a supply of Dried Milk**, at all events to young children. In the case of infants it would be essential to replace the vitamins, which would be affected by the heating process, by means of such adjuncts as orange juice and cod liver oil. It is generally recognised that tuberculous infections by means of milk usually occur in early age, and the use of dried milk, which in its reconstituted form is as near sterile as possible, certainly provides some safeguard against the germs of disease being introduced by milk, provided that reasonable care is utilised.
2. **Boiling.** This method destroys the nutritive value of the milk and from many points of view is not altogether desirable.
3. **Pasteurisation.** There are many differences of opinion regarding pasteurisation. Some authorities maintain that the heat necessary for pasteurisation destroys the vitamins and therefore diminishes the nutritive value of the milk. It is obviously preferable, therefore, to produce clean milk rather than to attempt, by means of drying, boiling, pasteurisation, or any other treatment, to render it free from pathogenic organisms. I am inclined to the opinion that efficient pasteurisation would be a good temporary method of solving the problem of tubercle-infected milk ; the process, however, would have to be carefully controlled, otherwise it might be worse than useless. The experiments carried out at the National Institute for Research in Dairying at Reading support this. From these tests, Mr. L. J. Meanwell, using naturally infected tuberculous milk, came to the following conclusions :—
  - (i.) The milk may still contain living tubercle bacilli owing to some factor in the process not having been rigidly observed. Efficient organisation, however, would prevent this.
  - (ii.) The milk may have lost some of its nutritive value by the process of pasteurisation.
  - (iii.) In most cases, treatment at a temperature of 145° Fah. for 30 minutes is effective in killing the tubercle bacillus in milk.



In order to stimulate the production of clean milk which can be drunk safely in its raw state, it would appear advantageous to make arrangements whereby all the cows in the County were examined at periodic intervals by Veterinary Surgeons. At the same time samples should be taken and examined bacteriologically for cleanliness and biologically for the presence or absence of living tubercle bacilli.

## HOUSING.

In Norfolk many of the houses occupied by agricultural labourers and people in similar circumstances are poor in fabric and accommodation, and cannot be considered in any respect reasonably fit. A large number of these houses are old and constructed in such a manner as to provide a minimum of reasonable requirements; *e.g.*, light, ventilation, etc., together with a maximum of discomfort. Many are built on poor sites with insufficient ground for the disposal of waste matters. In certain cases the fabric is in such a poor condition that no remedy short of demolition can be suggested. In other instances the rentals charged are too low to enable the landlord to spend money on renovations, and as a result the houses have fallen into a state of disrepair. A number of houses appear to be permanently damp, others are of the type known as "one up and one down," and whilst otherwise fit can only be considered suitable for occupation by elderly persons. Possibly many of these latter houses were fit when first occupied by a newly married couple, later, as the family increased so did the expenses and it was difficult, if not impossible, in some districts to procure a house at a rental within their means. Over-crowding resulted in many instances, separation of the sexes became impossible, and the occupants of such houses cannot enjoy that due measure of health which they might reasonably expect. Again, in the case of infectious disease occurring in the household, no isolation hospital being available in the majority of the districts, all the members of the family are subjected to the risk of infection and may be potential carriers of disease.

The houses where ventilation and lighting is inadequate, and which cannot be improved at a reasonable cost, together with those in which the fabric is in a bad state of repair, and/or permanently damp, are obviously unfit for human habitation. There can be no doubt that the constitutions of young children living in such houses become undermined and they are more liable to contract such diseases as rheumatism, tuberculosis and their various sequelæ. In Norfolk over £24,000 per annum is spent in institutional treatment for cases of tuberculosis, and it is noteworthy that in 1929, 43.8 per cent. of patients suffering from pulmonary tuberculosis who received institutional treatment were retained for more than six months, compared with 30 per cent. for all counties excluding London. There can be no doubt that the poor houses in which many of these people live have contributed to this state of affairs and the entire value of sanatorium treatment would have been lost had they been discharged at an earlier date. Bad housing alone does not cause tuberculosis, but it is an important contributory factor.

What then is the remedy? This would appear to lie in the provision of suitable houses which can be let at such rentals as can be afforded by the agricultural labourer. The following table gives particulars of the number of houses erected by each District Council up to the end of 1930, together with the rentals charged:—

## PARTICULARS re COUNCIL HOUSES ERECTED BY DISTRICT COUNCILS.

DISTRICT.	No. of dwellings erected up to 31.12.30.	Latest approximate cost per house.		Weekly Rentals charged (inclusive or exclusive of Rates).		Superficial Area		REMARKS.
		Parlour.	Non-Parlour.	Parlour.	Non-Parlour.	Parlour.	Non-Parlour.	
<b>RURAL</b>								
Aylsham .....	204	£420	£390	2/6—7/- exclusive	2/6 exclusive	sq. ft. 940	sq. ft. 800	
†Blofield .....	447	£325	*£340— £360	4/-—4/9 exclusive	4/-—4/6 exclusive	740—875	700—875	Rentals 8/- per week in Thorpe Sliding Scale of rentals—in some cases as low as 1/6 per week.
†Depwade .....	150	£450— £487		5/-—6/6 exclusive		801½		
Docking .....	90	£400— £500		4/9—9/- inclusive		847—936		
Downham .....	120	£420	£310	6/- exclusive	5/- exclusive	872	678	7/- per week is charged for parlour type houses where tenants are of the artisan class.
		Bungalows	£180		3/6 exclusive		551½	
†Erpingham .....	239	£404— £494		5/-—6/6 inclusive		790—938		
St. Faith's .....	206	—	£390	—	4/6—5/6 exclusive		780	
Fleggs .....	209	£370	£400	6/-—8/- inclusive	5/6—6/6	777	704 (Not built after 1925)	



Particulars re Council Houses erected by District Councils—continued.

DISTRICT.	No. of dwellings erected up to 31.12.30.	Latest approximate cost per house.		Weekly Rentals charged (inclusive or exclusive of rates).		Superficial Area		REMARKS.
		Parlour.	Non-Parlour.	Parlour.	Non-Parlour.	Parlour.	sq. ft.	
Forehoe .....	252	£320— £390		4/- 5/6 exclusive		sq. ft. 650—945		
†Henstead .....	191	£410— £450	£355—420	4/- —8/- exclusive	3/- exclusive	762	799	
Loddon and Clavering .....	76	£450	£418	5/- 5/6 exclusive	3/6 exclusive	873	829	
Freebridge Lynn	46	£370	£343	6/6 inclusive	5/9 exclusive	850	780	
King's Lynn .....	27	£420— £465	£296/5/0	2/- —2/6 exclusive	3/- exclusive	870	780	
†Marshland .....	317	£400	£349†	5/6—6/11 inclusive	exclusive	928		As much as 1 acre of land per house provided in many cases.
†Mitford and Launditch .....	92	£418	£297/10/0	6/- inclusive	4/6 exclusive	950	746	
†Smallburgh .....	226	£327	£225**	3/- —7/6 exclusive	3/- exclusive	750	555	All farm labourers charged 3/- per week plus rates..
†Swaffham .....	78	£375		5/3 inclusive		864		
†Thetford .....	60	£950	£700	5/- exclusive	4/6 exclusive	750—840	750	
		£400		4/6 exclusive		886		

DISTRICT.	No. of dwellings erected up to 31.12.30.	Latest approximate cost per house.		Weekly Rentals charged (inclusive or exclusive of rates).		Superficial Area		REMARKS.
		Parlour.	Non-Parlour.	Parlour.	Non-Parlour.	Parlour.	Non-Parlour.	
Walsingham .....	162	£400		4/6 inc.		sq. ft. 863		
Wayland .....	96	£450		6/6 exc.		942		
		£400—		3/6—4/6	2/6	864	687	
		£420	£320	exclusive	exclusive			
<b>URBAN.</b>								
Cromer .....	12	£362	—	10/6 inclusive	—	933	—	
East Dereham .....	10	£1067	—	8/- exclusive	—	950	—	
	26	£544	£400	8/- exclusive	7/6 inclusive	950	798	
† Diss .....	3	£970	—	8/- exclusive	—	Not stated		
	37	£970	—	7/- exclusive	—			
	8	£500	—	7/6 exclusive	—			
Downham .....	16		£351		7/6 exclusive		736	
	12	£440		8/6 exclusive		850		
Hunstanton .....	11		£417		8/- inclusive		734	
Sheringham .....	10	£605	£585	10/6 inclusive	9/9 inclusive	810	780	



Particulars *re* Council Houses erected by District Councils—*continued*.

DISTRICT.	No. of dwellings erected up to 31.12.30.	Latest approximate cost per house.		Weekly Rentals charged (inclusive or exclusive of rates). Non-Parlour.		Superficial Area.		REMARKS.
		Parlour.	Non-Parlour.	Parlour.	Non-Parlour.	sq. ft.	sq. ft.	
Swaffham .....	10	£1100		£22/2/0 P.A. inclusive		860		
	26		£450		6/3 inclusive		650	
North Walsham	20	£1100		12/6 inclusive		950		
Walsoken .....	28	£421/15		10/- inclusive		875		
Wells .....	20	£182		6/1—9/2 inclusive		Not stated		
	24	£1081		8/- —9/- exclusive		980—1050		
	8	£584		7/7 inclusive		980		
	30	£402		7/6 inclusive		940		
King's Lynn .....	281	£325	£316	6/6 exclusive	6/6	770	780	
M.B.	50		£154/10	4/11—7/1 inclusive			693	
Thetford M.B.	70	£994/12/8		7/6 exclusive		924		
	2	£1015/5/5		9/- exclusive		988		

† Exclusive of the cost of the land.  
\* Materials were costly when these were erected.

It will be seen that there has been considerable diversity in the manner in which the various Councils have carried out their duties under the Housing Acts, and whilst the majority of Councils have erected a considerable number of houses, yet there is undoubtedly a need for more in certain districts. Again, it will be seen that there is also a variance in rentals.

The object of the various Housing Acts is to ensure that houses are provided at a rental within the means of the working classes. One cannot but feel that the ordinary agricultural labourer with an average wage of 30/- per week is unable to afford more than 4/- per week rental inclusive of rates ; in fact, even this figure may be rather high. In districts where a high rental is charged many of the people have no alternative but to occupy houses which are far from fit.

It is worthy of note that certain Councils have been experimenting with a cheaper type of house which they have been able to let at a rental of approximately 2/6 to 3/- per week inclusive of rates. Generally speaking, the houses erected by District Councils, whilst varying considerably, provide adequate accommodation for an average family and can be considered eminently satisfactory. Special consideration, however, should be given to the question of providing houses for large families. If the houses now occupied by these families are in such a poor state that they can be condemned as unfit, the Housing Act of 1930 provides means whereby suitable houses can be erected and let at rentals which can be afforded by the persons for whom they are intended. Under Section 26 (3) of this Act a grant of £2 10s. 0d. per annum per person displaced in agricultural parishes, is made by the Ministry of Health over a period of 40 years.

The Housing (Rural Workers) Act, 1926, gives assistance towards re-conditioning existing houses as opposed to building new houses. The County Council has delegated the duties under this Act to the District Councils. Many suitable houses can be rendered fit at a very much lower cost than that involved in the erection of new houses. It is also permissible to provide other facilities, such as water supply, sanitary accommodation, and the like. The cost of conversions and renovations under the Act is borne by the owner and the local authority, the latter receiving a grant from the Ministry.

Many District Councils have availed themselves largely of the facilities offered in this way and the results have been very satisfactory. On the other hand in certain districts much more might have been done in this respect.

## **ORTHOPAEDIC TREATMENT.**

### **ORTHOPAEDIC TREATMENT SCHEME.**

#### **REVIEW.**

#### **HISTORY.**

At a meeting of the Medical and Attendance Committee on the 14th February, 1925, a letter from the Board of Education was read enquiring whether the Education Committee were in a position to submit proposals for the systematic provision of orthopaedic treatment for cripple children of School age in the Administrative County. The matter was deferred until a later meeting and on the 6th June, 1925, a memorandum on the position was submitted to the Committee by the School Medical Officer and the Secretary when it was recommended :—



- (a) that for the present, individual cases of physical defects be dealt with as they arise;
- (b) that the temporary services of a qualified Orthopaedic Surgeon be secured to inspect all Orthopaedic cases now upon the medical registers and to report as to which of these cases stand in need of institutional treatment in their order of urgency;
- (c) that a Joint Committee of the Public Health Committee and the Medical Inspection Committee be immediately formed and asked to meet at an early date to consider a comprehensive scheme for the treatment of physically defectives.

Meanwhile the treatment of cripple children under School age had been occupying the attention of the Maternity and Child Welfare Sub-Committee and on the 27th May, 1925, they decided to appoint representatives to the proposed Joint Committee.

The Joint Committee held their first meeting on the 18th July, 1925, and after several further meetings, a draft scheme was evolved and presented to the Education Committee and Public Health Committee early in 1927. This scheme was approved by the Board of Education on 30th March, 1927, by the Norfolk County Council on 2nd April, 1927, and by the Ministry of Health on 27th April, 1927.

## SCOPE.

The Scheme provides for the treatment of:—

- (a) Non-tuberculous crippling defects occurring in children under school age.
- (b) Non-tuberculous crippling defects occurring in children of School age and up to 16 years of age.
- (c) Tuberculous crippling defects occurring in children up to 16 years of age.

The cost of the treatment of children in Section (a) is borne by the Maternity and Child Welfare Sub-Committee, of those in Section (b) by the Education Committee, and of those in Section (c) by the Tuberculosis Sub-Committee.

## I. Institutional Treatment.

### (a) General Hospitals.

The Jenny Lind Hospital, Norwich, is the only General Hospital with which arrangements are in force for the treatment of Education and Maternity and Child Welfare cases. Tuberculous orthopaedic cases are treated at several General Hospitals approved by the Ministry of Health.

### (b) Cripple Hospital Schools.

The majority of Cripple Hospital School cases are treated at the Royal National Orthopaedic Hospital, London, and the St. Nicholas' and St. Martin's Orthopaedic Hospital, Pyrford, Surrey.

2. **Surgical Apparatus.**

Surgical apparatus is supplied upon the recommendation of the Orthopaedic Surgeon.

3. **Orthopaedic Surgeon.**

Mr. M. W. Bulman, M.D., M.S., F.R.C.S., was appointed as Orthopaedic Surgeon when the scheme commenced and still acts in that capacity. Cases are examined at Centres in the County but there have been individual cases unfit to travel, who have been examined in their own homes.

4. **Orthopaedic Nurse.**

Soon after the commencement of the Scheme, it was realised that the appointment of an Orthopaedic Nurse was essential. Cases discharged from Hospital were lost sight of by the Surgeon, surgical apparatus did not serve the purpose for which it was supplied owing to the lack of the necessary adjustment, alteration and repair so very often needed, and domiciliary treatment was, in many instances not effectively given or supervised. Miss J. E. Kemp was appointed as Orthopaedic Nurse and taking up her duties on the 16th April, 1928, is still acting in this capacity.

**STATISTICAL REVIEW.**

A. **Cases on Register.**

		<i>Education.</i>	<i>M.&amp;C.W.</i>	<i>T.B.</i>	<i>Total.</i>
1927	.....	122	23	4	149
1928	.....	273	46	—	319
1929	.....	324	126	59	509
1930	.....	386	125	66	577

The number of cases on the register for 1927 represents the number of cases seen by the Orthopaedic Surgeon during the year.

Prior to 1st April, 1929, the treatment of Tuberculous orthopaedic cases was dealt with under the Council's Tuberculosis Scheme and these cases did not appear on the Orthopaedic Register.

B. **Clinics held by Orthopaedic Surgeon.**

Year.	No. of Clinic Sessions.	CASES EXAMINED.			
		Education.	M. & C. W.	T.B.	TOTAL.
1927 .....	45	122	23	4	149
1928 .....	20	98	29	—	127
1929 .....	19	101	71	3	175
1930 .....	23	114	81	9	204

During 1929, 2 children were examined individually, not at clinics, and in 1930, 2 children were thus examined.



### C. Institutional Treatment.

Year.		Receiving Treatment at commencement of year.	Admitted during year.	Dis- charged during year.	Receiving Treatment at the end of the year.
EDUCATION CASES.					
1927	.....	—	30	21	9
1928	.....	9	17	22	4
1929	.....	4	12	13	3
1930	.....	3	21	17	7
MATERNITY AND CHILD WELFARE CASES.					
1927	.....	—	10	9	1
1928	.....	1	6	6	1
1929	.....	1	15	10	6
1930	.....	6	16	21	1
TUBERCULOSIS CASES.					
1927	.....	8	18	19	7
1928	.....	7	20	19	8
1929	.....	8	22	17	13
1930	.....	13	16	9	20

### D. Supply of Surgical Apparatus.

Year.	Number of cases supplied.			
	Education.	M. & C. W.	T.B.	TOTAL.
1927	31	—	—	31
1928	63	4	12	79
1929	70	13	20	103
1930	93	39	35	167

### E. Orthopaedic Nurse.

The visits paid by the Orthopaedic Nurse are as shown below :—

Year.	Education.	M. & C. W.	T.B.	TOTAL.
1928 from 16th April	859	241	—	1100
1929	1399	696	109	2204
1930	1115	742	142	1999

### Future of the Scheme.

The Maternity and Child Welfare Sub-Committee has decided that in addition to milk special foods such as Cod Liver Oil, Parrish's Food and Virol should be provided for children under school age suffering from rickets where the parents are unable to afford the cost. The above foods will be supplied either free, or at less than cost price, and it is anticipated that this arrangement will be of great benefit.

The question of vocational training is dealt with in my Report as School Medical Officer. It is felt that a scheme should be evolved for the training of certain children who, on leaving school, will, by reason of their physical condition, be unable to earn their living without such special training.

Information respecting the treatment of children between 5 and 16 years of age, suffering from non-tuberculous crippling defects is given in my Report as School Medical Officer. The following particulars refer only to the treatment of children under school age, for which the Maternity and Child Welfare Committee is responsible and of children suffering from tuberculous crippling defects.

No particular alterations have been made during the past year in the administration of the Scheme approved by the Ministry of Health and Board of Education in 1927.

1. **Ascertainment.**

(a) **Maternity and Child Welfare Cases.**

As pointed out in my Report of last year, early ascertainment is essential for successful treatment, and those whose work is concerned with infant welfare are realising more and more the advisability of reporting slight defects rather than allowing them to develop to a greater degree before notification is sent. The Health Visitors and District Nurses continue to be the main source of notification, practically all new cases being reported by them.

63 fresh cases have been investigated during the year and 49 of these were on the register of current cases at the end of the year. The other 14 cases were discontinued for reasons given below :—

No treatment needed .....	.....	.....	.....	12
Treatment refused .....	.....	.....	.....	1
Removed from County .....	.....	.....	.....	1
				<hr/> 14 <hr/>

(b) **Tuberculous Cases.**

Most of the new cases investigated during the year have been those previously notified by General Practitioners under the Public Health (Tuberculosis) Regulations, 1912. 13 new cases have been examined and 11 of these were being retained on the Register of current cases at the end of the year, the other 2 having been discontinued as non-tuberculous.

Co-operation is maintained with the General Practitioners of the County who are kept closely informed of the treatment provided for their patients under the Council's Scheme.

2. **Clinics held by the Orthopaedic Surgeon.**

Inspection clinics have been held and children examined as follows :—

CENTRE.	No. of Clinic sessions held.	No. of cases examined.				TOTAL.
		Maternity & Child Welfare.		Tuberculosis.		
		New.	Re-examinations.	New.	Re-examinations.	
Norwich .....	17	29	30	5	1	65
King's Lynn	6	8	14	3	—	25
TOTALS .....	23	37	44	8	1	90



In addition to the above, one new Maternity and Child Welfare case was examined at the Norfolk and Norwich Hospital.

These figures show an increase on the previous year when 75 cases were examined and also on 1928 when only 29 were seen.

No treatment clinics have been established in the County for the reasons given in my last Report.

### 3. Institutional Treatment.

#### (a) Maternity and Child Welfare Cases.

INSTITUTION.	Receiving Treatment 1.1.30	Admitted during year.	Discharged during year.	Died in Hospital.	Receiving Treatment 31.12.30.	Awaiting admission 31.12.30.
Jenny Lind Hospital, Norwich .....	6	15	19	1	1	1
Royal National Orthopaedic Hospital, London	—	1	1	—	—	2
TOTALS .....	6	16	20	1	1	3

The treatment of the 21 cases leaving Institutions during the year has been analysed as shown below :—

INSTITUTION.	DEFORMITY.	NO. OF CASES TREATED.	TREATMENT.	RESULT OF TREATMENT.
Jenny Lind Hospital Norwich	Rickets— bow legs	9	Osteotomy of tibiae ..... 7	Legs straight 8  Much improved 1
			Osteoclasia of tibiae ..... 1	
			Osteotomy of tibiae and femora ..... 1	
	Rickets— generalised	2	General Treatment for Rickets ..... 2	Improved ..... 1 Died ..... 1
			Tenotomy of tendo achillis, tibialis posticus and anticus ..... 2	
			Excision of head of astragalus and tenotomy of tendo achillis, tibialis posticus and plantar fascia ..... 1 Tenotomy of tendo achillis ..... 1 Manipulation and massage ..... 1	
	Spastic Hemiplegia	1	Massage and observation	Diagnosed polio-encephalitis. Not suitable for surgical treatment.



INSTITUTION.	DEFORMITY.	NO. OF CASES TREATED.	TREATMENT.	RESULT OF TREATMENT.
Royal National Orthopaedic Hosp., London	Knock knees	1	Osteotomy of right femur	Good result
	Congenital dislocation of hip	1	Manipulation and plaster	Hip in position (To be readmitted for further treatment).
	Spasticity of legs	1	Tenotomy of adductors of both thighs	Very little improvement owing to mental condition
	Congenital talipes equino varus	1	Open operation—soft parts only	Deformity corrected.

(b) Tuberculosis Cases.

INSTITUTION.	Receiving Treatment 1.1.30	Admitted during year.	Discharged during year.	Receiving Treatment 31.12.30.	Awaiting Admission 31.12.30.
Jenny Lind Hospital, Norwich .....	2	4	5*	1	—
Norfolk & Norwich Hospital, Norwich .....	—	1	—	1	—
West Norfolk & Lynn Hospital, King's Lynn	—	2	—	2	—
War Memorial Hospital Beccles .....	2	—	—	2	—
Bury & West Suffolk Hospital, Bury St. Edmunds .....	1	—	—	1	—
St. Vincent's Orthopaedic Hospital, Eastcote, Middlesex .....	1	—	—	1	—
Lord Mayor Treloar Cripples Hospital, Alton, Hampshire .....	1	1	—	2	—
St. Nicholas & St. Martin's Orthopaedic Hospital, Pyrford, Surrey .....	6	7	3†	10	—
Royal National Orthopaedic Hospital, London .....	—	1	1	—	—
TOTALS .....	13	16	9	20	—

\* One of these cases was transferred to the Lord Mayor Treloar Cripples Hospital, Alton, and one to the St. Nicholas and St. Martins Orthopaedic Hospital, Pyrford.

† Includes one case diagnosed as non-tuberculous after admission and responsibility assumed by Education Committee.

The treatment and result of treatment in the remaining 6 cases discharged during the year is shown below :



INSTITUTION.	CASE REF.	DIAGNOSIS AND CONDITION ON ADMISSION.	TREATMENT GIVEN.	CONDITION ON DISCHARGE.
Jenny Lind Hospital, Norwich	A	T.B. hip—discharging sinus	Sunlight and fresh air	Sinus healed
	B.	T.B. dactylitis—swelling of left thumb	Thumb aspirated and pus evacuated	Very good result. Splint supplied. No T.B. organisms found
	C.	? T.B. spine—prominence in lumbar dorsal region	Put in plaster jacket	X-ray showed no evidence of tubercle.
Royal National Orthopaedic Hospital, London	D.	T.B. spine—pain and tenderness	Observation	No signs of disease found
	E.	T.B. hip—kicked by a bullock	Observation	No signs of tubercle found. X-rays normal
St. Nicholas and St. Martins Orthopaedic Hospital, Pyrford, Surrey	F.	T.B. spine—severe deformity	Thomas' collar supplied	Disease quiescent. No further treatment possible

4. Supply of Surgical Apparatus.

The following apparatus has been ordered during the year :—

	M.&C.W.	T.B.
Surgical Boots .....	7	6
Surgical Boots and Instruments .....	14	—
Spinal Supports .....	1	4
Hip Splints .....	—	2
Club Foot Shoes .....	7	—
Hand Splints .....	1	1
Collar .....	—	1
Crutches .....	—	4
Crutch Rubbers .....	—	1
Straps for Spinal Supports .....	—	8
Alterations to instruments .....	4	—
Repairs to Boots .....	1	—
Repairs to Instruments .....	4	8
	<hr/> 39	<hr/> 35

In one case, the Tuberculosis Committee contributed one half of the cost of a hip splint supplied by the Norfolk and Norwich Hospital on the recommendation of one of their Surgeons.

Of the cases on the Register at the end of the year, surgical apparatus was being worn by the following :—

	M.&C.W.	T.B.
Surgical Boots .....	4	6
Ordinary boots wedged or otherwise altered .....	19	—
Surgical Boots and Instruments .....	12	—
Spinal Supports .....	—	11
Club Foot Shoes .....	9	—
Hip Splint .....	—	3
Hand Splints .....	1	—
Caliper .....	—	1
Crutches .....	—	1
Collar .....	—	1
	<hr/> 45	<hr/> 23

5. Services of Orthopaedic Nurse.

It is perhaps in dealing with children under School age that the services of the Orthopaedic Nurse are most appreciated. More visits per case are required and parents realise the Council's interest in the welfare of their children through the attention which is given them. During the year 742 visits were made to Maternity and Child Welfare cases.

In connection with tuberculous cases, the Orthopaedic Nurse has continued to co-operate with the Tuberculosis Officers especially in the matter of domiciliary treatment. Miss Kemp paid 142 visits in the period under review.



6. Cases Discontinued.

36 children on the Maternity and Child Welfare Section of the Register and 3 on the Tuberculosis Section at the beginning of the year have been crossed off for the reasons given :—

	M.&C.W.	T.B.
Cured .....	23	2
Further treatment not needed or not advised .....	9	—
Treatment Refused .....	1	—
Died .....	3	1
	<hr/> 36	<hr/> 3

7. Cases on the Register.

(a) Maternity and Child Welfare Cases.

At the end of the year there were 125 current cases on the Register as compared with 126 at the end of 1929 and 70 at the end of 1928. The former figure is composed of the following :

Rickets .....	72
Congenital Deformities :	
Feet—Talipes equino varus .....	16
Talipes equino valgus .....	4
Calcaneo valgus .....	2
Metatarsal varus .....	3
Hip .....	1
Knee .....	1
Hand .....	1
Arm .....	1
Chest .....	1
Infantile Paralysis .....	5
Spastic paralysis .....	6
Polio-encephalitis .....	1
Wry Neck .....	2
Scoliosis .....	1
Deformity of Toes .....	1
Miscellaneous .....	7
	<hr/> 125

75 of these cases have been examined at least once by the Orthopaedic Surgeon and 28 have received institutional treatment under the Scheme.

(b) Tuberculous Cases.

66 current cases remained on the Tuberculosis Register as compared with 59 at the end of 1929 :

Spine .....	21
Hip .....	19
Knee .....	6
Ankle .....	5
Finger .....	4
Elbow .....	2
Shoulder .....	2
Thigh .....	1
Sacro-iliac Joint .....	1

Thumb .....	.....	.....	.....	.....	.....	1
Knee and Elbow .....	.....	.....	.....	.....	.....	1
Multiple .....	.....	.....	.....	.....	.....	1
Amputation of Leg .....	.....	.....	.....	.....	.....	1
Observation .....	.....	.....	.....	.....	.....	1
						<hr/> 66

14 cases have been examined by the Orthopaedic Surgeon and 52 have had institutional treatment.

## MATERNITY AND CHILD WELFARE.

### AREA.

During the year under review the County Council was responsible for maternity and child welfare throughout the whole administrative County with the exception of the municipal borough of King's Lynn, the urban district of Swaffham, and the rural district of Forehoe. On April 1st, 1931, however the Minister of Health issued an Order transferring the maternity and child welfare functions of the two last named districts to the County Council.

### MIDWIFERY SERVICE.

All midwives certified under the Midwives Acts must notify the County Council each year of their intention to practise. The following table is a brief summary of such notifications received during 1930 :—

			<i>Cert.</i> <i>C.M.B.</i>	<i>Bona-</i> <i>fide.</i>	<i>Total.</i>
Permanent .....	.....	.....	150	4	154
Temporary .....	.....	.....	7	—	7
			<hr/>	<hr/>	<hr/>
TOTAL .....	.....	.....	157	4	161
			<hr/>	<hr/>	<hr/>

Over 460 parishes are covered by 121 District Nurse-Midwives. Except in five cases, the associations employing these nurses are all affiliated to the Norfolk Nursing Federation. It would therefore appear that more than 200 parishes have no arrangements for the services of a midwife ; this figure, however, includes a number of parishes covered by independent midwives, 40 of whom notified their intention to practise in the County during the year. These midwives probably cover between 50 and 100 parishes.

### Training of Midwives.

The County Council makes a grant of £30 in respect of each midwife permanently appointed in the County, working under the auspices of the Norfolk Nursing Federation.

### Inspection of Midwives.

Under the Midwives Acts, 1902 and 1918, the County Council is the Local Supervising Authority throughout the whole of the Administrative County. The Inspector of Midwives and Superintendent Health Visitor is also Superintendent of the County Nursing Association. There are two Assistant Inspectors—one appointed by the County Council and one by the Norfolk Nursing Federation. A further Assistant was appointed by the County Council early in 1931.

590 routine inspections were made during the year, being an average of 3—4 visits per midwife.



Under the rules of the Central Midwives Board, midwives are required to summon medical help under certain specified emergencies and to notify the Local Supervising Authority that they have done so. 367 notifications were received during 1930 (300 for mothers and 67 for infants), *i.e.*, 33.27% of the cases attended by midwives. In 1929, 297 notifications were received (237 for mothers and 60 for infants).

The following table shows the conditions for which medical help was sought. In this connection, 75 special visits of investigation were made by the Inspectors.

**For Mothers.**

<b>(a) During Pregnancy.</b>					
Albuminuria	.....	.....	.....	.....	11
Dangerous Varicose Veins	.....	.....	.....	.....	2
Vaginal Discharge	.....	.....	.....	.....	3
Pernicious vomiting	.....	.....	.....	.....	2
Fits	.....	.....	.....	.....	1
Other Illnesses	.....	.....	.....	.....	6
					<hr/>
					25

<b>(b) At Labour.</b>					
Placenta Prævia	.....	.....	.....	.....	1
Complete Abortions					
(i) under four months		11			
(ii) „ six „		6			
					<hr/>
					17
A.P.H.	.....	.....	.....	.....	13
Delayed or obstructed labour (of which 37 ended					
instrumentally)	.....	.....	.....	.....	65
Malpresentations	.....	.....	.....	.....	13
Complicated Breech	.....	.....	.....	.....	17
Adherent placenta	.....	.....	.....	.....	10
Adherent Membranes	.....	.....	.....	.....	2
P.P.H.	.....	.....	.....	.....	8
Perineal Tears	.....	.....	.....	.....	86
Premature labour (1 twins)	.....	.....	.....	.....	3
Fits (considered Epileptic)	.....	.....	.....	.....	1
In 4 cases relatives sent for doctor either through over					
anxiety or midwives being out on other work	.....				4
					<hr/>
					240

<b>(c) During Puerperium.</b>					
Pyrexia	.....	.....	.....	.....	15
Offensive Lochia	.....	.....	.....	.....	2
Leg Conditions (1 Phlegmasia)	.....	.....	.....	.....	7
Breast Conditions	.....	.....	.....	.....	4
Sub-involution	.....	.....	.....	.....	2
Other Illnesses	.....	.....	.....	.....	5
					<hr/>
					35

**Total for Mothers** ..... **300**

For Infants.

Discharging eyes .....	.....	.....	.....	.....	.....	24
Prematurity and Feebleness .....	.....	.....	.....	.....	.....	19
Rashes and Blisters .....	.....	.....	.....	.....	.....	5
Urinary Disorders .....	.....	.....	.....	.....	.....	4
Bowel Disorders .....	.....	.....	.....	.....	.....	3
Fits .....	.....	.....	.....	.....	.....	2
Sudden deaths of Infants :—						
Malformation of heart .....	.....	1				
Overlaid .....	.....	1				
Died before arrival of						
Midwife .....	.....	1				
		—				3
Deformities .....	.....	.....	.....	.....	.....	7

Total for Infants ..... 67  
Total number of medical help forms 367

2,620 births were attended by midwives ; 1,130 as midwifery cases and 1,490 as maternity cases.

The following table shows the number of still-births reported by midwives during the year :—

Premature .....	.....	.....	.....	.....	.....	7
Full Term .....	.....	.....	.....	.....	.....	15
						—
TOTAL .....	.....	.....	.....	.....	.....	22

PUBLIC HEALTH (OPHTHALMIA NEONATORUM) REGULATIONS, 1926.

CASES.			Vision Unim- paired.	Vision Impaired.	Total Blindness	Deaths.
Notified.	Treated					
	At Home.	At Hospital.				
12	10	2	12	—	—	—

PUBLIC HEALTH (PUERPERAL FEVER AND PYREXIA) REGULATIONS, 1926.

Disease.	No. of Cases Notified.	No. of Cases Nursed.	No. of applications for 2nd opinion.	No. of cases removed to Hospital.
Puerperal Fever .....	16	3	3	10
Puerperal Pyrexia .....	52	11	11	18

In the past, when a practitioner considered hospital treatment desirable, and was unable to obtain a bed for his patient, it was possible by arrangement with the County Medical Officer to secure admission to the Thorpe Maternity Home, Norwich. During the year, however, the Minister of Health withdrew his approval of this home, and as a temporary measure arrangements have been made for the admission of County patients to the Norwich Isolation Hospital, provided accommodation is available.



**ABNORMAL MATERNITY CASES.**

Arrangements were made for seven patients to be admitted to hospital for their confinements, owing to abnormal conditions. In each case the County Council accepted responsibility for the maintenance charges.

**MATERNAL MORTALITY.**

The causes of maternal deaths during the year, as given by the Registrar General, were as follows :—

Puerperal Sepsis	.....	.....	.....	.....	8
Other accidents and diseases of pregnancy and parturition	.....	.....	.....	.....	10
					—
TOTAL	.....	.....	.....	.....	18
					—

The County Medical Officer submitted reports to the Maternal Mortality Committee of the Ministry of Health on 16 cases. In the remaining two cases death was due to pneumonia and no reports were made to the Ministry.

**INFANTILE MORTALITY.**

The number of deaths under one year of age was 231, giving a net death rate of 46.93 per 1000 births, as compared with 60 in England and Wales. The infant death-rates for the previous five years are given below :—

1929	1928	1927	1926	1925
—	—	—	—	—
59.99	56.04	65.65	56.23	53.71

19 deaths occurred in illegitimate children under one year of age, representing a death-rate of 63.30 per 1,000 births. This shows a decrease on the rate for 1929, which was 119.27. The infantile mortality is the lowest recorded and is commendable, considering the housing conditions under which many of the people live. The table of infantile statistics below gives the number of deaths under one year and death-rates in each sanitary district.

# INFANTILE STATISTICS.

SANITARY DISTRICT.	Estimated Population.	* Total Births.	* Birth Rate 1929	Rate 1930	Deaths under 1 year. 1930	Infantile Death Rate. 1929.	1930.
RURAL.							
Aylsham .....	16,270	268	15.98	16.47	13	45.80	48.51
Blofield .....	14,260	179	14.45	12.55	7	64.68	39.11
Depwade .....	17,900	281	14.64	15.70	11	48.69	39.15
Docking .....	16,350	244	16.70	14.92	15	43.17	61.48
Downham .....	15,500	256	18.83	16.52	17	71.17	66.41
Erpingham .....	17,160	260	12.96	15.15	14	52.17	53.85
Flegg, E. & W. ....	10,240	165	15.54	16.11	11	85.89	66.67
Forehoe .....	12,770	212	16.53	16.60	9	47.85	42.45
Freebridge Lynn ..	12,210	177	15.59	14.50	12	42.55	67.80
Henstead .....	10,660	147	15.70	13.79	7	83.83	47.62
Loddon and Clavinging .....	11,960	198	16.42	16.56	11	60.00	55.56
Lynn, West .....	927	14	14.24	15.10	—	—	—
Marshland .....	14,210	284	18.19	19.99	17	78.65	59.86
Mitford and Launditch .....	17,180	269	13.65	15.66	16	59.07	59.48
St. Faith's .....	13,820	224	14.83	16.21	9	50.02	40.18
Smallburgh .....	13,910	197	15.10	14.16	8	88.79	40.61
Swaffham .....	6,837	110	16.90	16.09	6	59.83	54.55
Thetford .....	9,276	143	20.19	15.42	3	59.14	20.98
Walsingham .....	15,860	238	16.37	15.01	7	38.31	29.41
Wayland .....	13,050	183	14.33	14.02	8	53.76	43.72
TOTAL .....	260,350	4049	15.78	15.55	201	58.65	49.64
URBAN.							
Cromer .....	4,096	50	9.3	12.21	—	—	—
East Dereham.....	5,573	87	12.87	15.61	3	28.17	34.48
Diss .....	3,416	42	14.25	12.30	1	122.45	23.81
Downham .....	2,452	46	19.57	18.76	1	41.67	21.74
Hunstanton .....	3,354	22	5.46	6.56	1	95.24	45.45
Sheringham .....	4,022	48	12.85	11.93	2	56.60	41.67
Swaffham .....	2,739	37	14.35	13.51	3	25.64	81.08
North Walsham .....	4,202	45	11.85	10.71	1	58.82	22.22
Walsoken .....	3,976	77	15.33	19.37	5	84.75	64.94
Wells-next-Sea .....	2,577	36	12.16	13.97	—	30.30	—
Kiug's Lynn M.B. ....	20,320	325	15.82	15.99	12	90.91	36.92
Thetford M.B.....	4,223	58	13.29	13.73	1	34.48	17.24
TOTAL .....	60,950	873	13.61	14.32	30	66.59	34.36
Total for Administrative County .....	321,300	4922	15.40	15.32	231	59.996	46.93

\*Birth and Death Rates are based on the Registrar General's estimated populations for respective purposes.



NOTIFICATION OF BIRTHS.

Under the Notification of Births (Transfer) Order, 1930, the administration of the Notification of Births Acts, 1907 and 1915, was transferred on April 1st, 1930, from the District Councils to the County Council. The Order relates to the whole of the Administrative County with the exception of King's Lynn M.B., Swaffham U.D., and Forehoe R.D., *i.e.*, that part of Norfolk administered by the County Council for maternity and child welfare purposes.

All births occurring in this area are now notified direct to the County Medical Officer and each case is followed up by the Council's Health Visitors. Any defects found (*e.g.*, Orthopaedic, Tuberculous, Vision, etc.), are reported and dealt with under the appropriate scheme.

Particulars are forwarded monthly to each registrar in respect of births notified in his registration sub-district. The registrar compares these with his records, and any birth found to have been registered but not notified is reported to the County Medical Officer. Each case is investigated and a warning letter sent to the person or persons in default drawing attention to the legal requirements of the Acts.

The following are particulars of births notified during the year :—

Period January 1st—March 31st, 1930.

Number of duplicates of notifications of births received from District Medical Officers of Health during the three months	.....	.....	.....	.....	.....	.....	.....	1202
---	-------	-------	-------	-------	-------	-------	-------	------

Period April 1st to December 31st, 1930.

(A) Births occurring in the County Maternity and Child Welfare Area :—

				<i>Live Births.</i>	<i>Stillbirths.</i>	
By Doctors and parents	.....	.....	.....	2158	108	
By Midwives	.....	.....	.....	722	14	
Total	.....	.....	.....	2880	122	3002
Births reported by registrars as not notified						123

(B) Births occurring in the King's Lynn M.B., Swaffham U.D., and Forehoe R.D. :—

				<i>Live Births.</i>	<i>Stillbirths.</i>	
By doctors and parents	.....	.....	.....	231	11	
By Midwives	.....	.....	.....	202	1	
Total	.....	.....	.....	433	12	445
GRAND TOTAL						4772

HEALTH VISITING.

The following table indicates the position in the County on December 31st, 1930 :—

	Whole-time Health Visitors.	Nurses from Local Associations as part-time Health Visitors.		Unprovided.	TOTAL.
		Affiliated	Non-Affiliated.		
Parishes .....	192	440	10	48	690
Health Visitors	5*	113	4	—	122

\* Includes the Health Visitor of the Forehoe R.D.C.

It will be seen from this table that there is no provision for health visiting in 48 parishes. Early in 1931, however, only 7 parishes remained uncovered.

During 1929 the County Council adopted a scheme for assisting trained nurses to obtain the Health Visitor's Certificate required by the Ministry of Health. Two candidates were sent for training in October, 1930, for a six months' course, and both commenced work in the County in April, 1931.

The following table gives particulars of the Health Visitors' work during the past five years :—

Year.	Expectant Mothers.		Infants under 1 year.		Children 1—5 years.
	First Visits.	Total Visits.	First Visits.	Total Visits.	Total Visits.
1926	1873	6596	2707	20632	48048
1927	1914	6430	2743	21554	51255
1928	2804	7429	2925	21553	56437
1929	2106	7028	2846	23863	56509
1930	2354	8492	3340	24369	59003

MATERNITY AND CHILD WELFARE CENTRES.

There is a considerable diversity of opinion concerning the services which should be given at maternity and child welfare centres. This of course will depend upon many factors, but there can be no doubt that, as far as practicable, advice should be given only *re* diet and general management of mother and child, supplemented by such adjuncts as dental treatment, the provision of milk, cod liver oil and such items, where necessary. Where treatment is needed this is much better carried out by the family doctor except in abnormal cases, when the services of a specialist and hospital beds are necessary.

Although some counties had established maternity and child welfare centres prior to the Maternity and Child Welfare Act, 1918, yet the movement has been slow in Norfolk. Undoubtedly more centres are needed, in order to enable the mothers and infants in the various parts of the county to benefit from the advice given. In a county as sparsely populated as Norfolk it would appear more advantageous to establish a comparatively small number of large centres and to transport the mothers and infants there from the outlying villages, rather than to set up a large number of small ill-attended centres.



The centre should provide ante-natal facilities and be connected with such clinics at the general hospitals, when existing. Hospital beds should be available for anticipated or actual abnormal cases.

On December 31st, 1930, there were 12 centres in the county with a medical officer regularly in attendance. 4 centres had been established by District Councils, viz. : 3 by the Forehoe Rural District and 1 by the Swaffham Urban District. The remaining 8 had been brought into being entirely by the efforts of voluntary agencies, 4 being run by, and one in conjunction with, the British Red Cross Society.

The County Council has assisted 8 of these centres by an annual grant, and the work is carried out in co-operation with the Public Health Department. In addition grants are made to two centres outside the county, where Norfolk mothers and children attend.

The centres established by the Forehoe and Swaffham District Councils were transferred to the County Council in April, 1931. During 1930 the Council sanctioned the establishment of welfare centres at the Public Health Department, Thorpe Road, Norwich, and at Aylsham. Both centres are held once monthly, and at this early stage have fully justified their existence.

The following table gives particulars of attendances at the Centres during the year :—

DISTRICT	Address of Centre.	Medical Officer.	No. of Sessions.	No. of times Doctor present.	Attendance of Children.	Total Mothers and Children.	Average Mothers Children.
<b>(1) Centres established by District Councils acting as Maternity &amp; Child Welfare Authorities.</b>							
NEW COSTESSEY .....	Mrs. Rix, Mill Road, New Costessey	Dr. A. P. Agnew	12	12	187	321	27
HINGHAM .....	Mrs. Batley, Market Place	Dr. A. P. Agnew	12	12	162	288	24
WYMONDHAM .....	Labour Institute	Dr. A. P. Agnew	12	12	304	537	45
SWAFFHAM .....	Chapel Rooms	Dr. R. O. Townend	12	12	180	186	16
<b>(2) Centres established by Voluntary Associations.</b>							
BLOFIELD .....	Blofield Hall	Dr. J. D. McKelvie	24	24	513	746	31
DOCKING .....	Oddfellows' Hall	Dr. N. Campbell	10	10	200	200	20
HOLT .....	Church Hall	Drs. Hendrie and King alternately	22	22	197	260	12
KING'S LYNN .....	St. James Park	Dr. E. M. Baker-Burton	50	50	3068	3125	65
SHERINGHAM .....	Sheringham	Dr. Linnell or Dr. Lawson	42	16	565	565	14
THETFORD .....	Old Malting House	Dr. A. Oliver	23	23	571	627	28
WALSINGHAM .....	The New Hall	Dr. F. H. Sturdee	9	8	34	98	11
WOODBASTWICK .....	Woodbastwick Hall	Dr. Mills	12	4	164	283	24
<b>(3) Centres established outside the Administrative County.</b>							
BECCLES*	Beccles	—	50	45	146	225	5
WISBECH *	St. Augustine's	Dr. H. L. Groom	50	36	243	330	7

\* Norfolk cases only.



In addition, certain smaller centres have been established by voluntary agencies, usually the local nursing association. These centres are mainly weighing centres only, and are not assisted by grants from the County Council. They comprise :—

Alburgh\*, Attleborough, Bawdeswell, Brancaster, Buxton, Coltishall, Denton\*, Diss, Earsham\*, East Dereham, Gunton, Hunstanton, Kenninghall, Mulbarton, North Walsham, Redenhall, Stoke Holy Cross, Thornage, Westacre, and Woodton.

\* Run in conjunction with the British Red Cross Society.

## **SUPPLY OF MILK TO NECESSITOUS EXPECTANT AND NURSING MOTHERS AND YOUNG CHILDREN.**

The following District Councils continue to administer this scheme on behalf of the County Council :—

### **Rural.**

Aylsham.  
Blofield.  
Depwade.  
Docking.  
E. & W. Flegg.  
Forehoe.  
Henstead.  
Mitford and Launditch.  
Smallburgh.  
Thetford.  
Walsingham.

### **Urban.**

Cromer.  
Diss.  
East Dereham.  
Sheringham.  
Swaffham.  
North Walsham.  
Wells.

The County Medical Officer receives and considers applications from residents in districts where the local Council has not adopted the County Scheme and 322 certificates for 125 individuals were issued during the year in this respect.

King's Lynn has its own scheme, and at Thetford the Voluntary Maternity and Child Welfare Association supplies milk under a separate scheme.

Previous to 1930, the District Councils administering the county scheme, paid the dairymen's accounts and claimed refunds from the County Council. During the year, however, arrangements were made whereby these accounts were submitted to the County Medical Officer and paid direct from the County Fund. These new arrangements have worked satisfactorily and have enabled a more accurate estimate of expenditure to be made.

## DENTAL TREATMENT FOR NECESSITOUS EXPECTANT AND NURSING MOTHERS.

This scheme was inaugurated in the latter part of 1926. The County Council has established a panel of fully qualified dental surgeons, who carry out treatment at their surgeries throughout the county at the same scale of fees as that fixed by the Dental Benefit Joint Committee for the purposes of National Health Insurance. Under the original scheme applicants were classified as follows :—

Class I.	Total net income	not exceeding 6/-	per head per week.
Class II.	„ „ „	between 6/- and 10/-	per head per week.
Class III.	„ „ „	exceeding 10/-	per head per week.

The following inclusive scale contributions were required from the applicants for treatment and dentures :—

Class I.	1/-
Class II.	One-quarter of the cost.
Class III.	As fixed by Committee.

In 1927 this scale was varied by charging in addition one-half the cost of the dentures.

As the scope of the scheme was affected materially, the charge for dentures was reduced to the following during 1929 :—

Class I.	One-sixth.
Class II.	One-third.
Class III.	As fixed by Committee.

Another alteration was made early in 1931, when Class II. cases were further classified as follows :—

Class IIa.	One-fifth cost of extractions and dentures.
Class IIb.	One-quarter „ „ „
Class IIc.	{ One-quarter cost of extractions.
	{ One-third cost of dentures.

The following tables show how this scheme has developed :—

### Applications.

Year.		Class I.	Class II.	Class III.	Total.
1927	.....	29	17	2	48
1928	.....	42	15	2	59
1929	.....	103	40	2	145
1930	.....	244	118	18	380

### Treatment.

#### (i.) Exclusive of Dentures.

Year.		Class I.	Class II.	Class III.	Total.
1927	.....	27	10	4	41
1928	.....	26	11	1	38
1929	.....	80	32	2	114
1930	.....	161	57	13	231

#### (ii.) Dentures.

Year.		Class I.	Class II.	Class III.	Total.
1927	.....	17	4	2	23
1928	.....	11	4	—	15
1929	.....	57	26	1	84
1930	.....	75	20	11	106



## INFANT LIFE PROTECTION.

Under Section 2 (a) of the Local Government Act, 1929, on April 1st, 1930, the administration of Part I. of the Children Act, 1908, was transferred from Boards of Guardians to the County Council. The transfer applies to the whole of the administrative county with the exception of the municipal borough of King's Lynn.

Every person who undertakes for payment the nursing and maintenance of any child under the age of seven apart from its parents, or having no parents, for more than 48 hours, must give notice to the County Council. Notice must also be given if a registered foster-parent or nurse child removes, or in the event of death of the child. All such notices are sent to the County Medical Officer.

Under Section 4 of the Act, the Council may fix the number of infants under seven years of age which may be kept in any dwelling by a registered foster-parent.

If any infant, in respect of which notice is given under the Act, is kept :—

- (a) in any premises which are overcrowded, dangerous or insanitary ; or
- (b) by any person who, by reason of negligence, ignorance, inebriety, immorality, criminal conduct, or other similar cause, is unfit to have care of it ; or
- (c) by any person or in any premises in contravention of any of the provisions of the Act,

the County Council may remove the infant to a place of safety until it can be restored to its relatives or otherwise lawfully disposed of. The following have been nominated as places of safety :—

- (a) Public Assistance Institutions.
- (b) Children's Homes.
- (c) Any Police Station.

In their respective areas, the whole-time Health Visitors act as Infant Life Protection Visitors, while the remainder of the county is covered by School Nurses. At the first visit primary reports are made on the foster-parent, home, and nurse child. In normal cases subsequent visits are made at intervals of three to four months, more frequent visits being made in cases where conditions are not satisfactory.

On April 1st, 1930, there were 152 foster-parents on the register, having the care of 199 nurse children, all of whom have now been visited. On December 31st, 1930, there were 178 foster-parents registered and 242 nurse children-

Only one home visited during the nine months (April to December, 1930) was found to be unsuitable. In this case the child was removed to the care of its mother.

## MATERNITY AND NURSING HOMES.

All Homes which apply for registration are visited by the County Medical Officer and if found suitable, registered.

The County Council has adopted the model Bye-Laws. Each Home when registered is supplied with a register, receipt book, and a copy of the bye-laws. Periodical visits are made to the Registered Homes, the inspecting officers being the County Medical Officer, the Deputy County Medical Officer, and the Inspector of Midwives.

The following table gives particulars of the action which has been taken under the Nursing Homes Registration Act, 1927 :—

Number of applications for registration .....	.....	.....	.....	26
Number of Homes registered				
Maternity Cases only .....	.....	.....	1	
Medical and Surgical Cases only .....	.....	.....	3	
Maternity and General cases .....	.....	.....	16	
			—	20
Number of Orders cancelling registration .....	.....	.....	.....	6
Number of Appeals against such Orders .....	.....	.....	.....	Nil
Number of Applications for exemption .....	.....	.....	.....	8
Number of exemptions (a) granted .....	.....	.....	.....	1
(b) refused .....	.....	.....	.....	7

No application has been received under Section 9 (2) of the Act, for delegation of powers.

## TUBERCULOSIS.

### 1. NOTIFICATIONS UNDER PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS 1912.

There were 327 new cases of pulmonary tuberculosis and 164 new cases of non-pulmonary tuberculosis notified during the year. The number of deaths in the same period were 184 and 50 respectively. The following table gives the age and sex distribution of these cases, together with the number of deaths :

Age periods.	Notifications.				Deaths.			
	Pulmonary.		Non-pulmonary.		Pulmonary.		Non-pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0— 1 .....	Nil.		2	2	Nil.		4	Nil.
1— 5 .....	2	2	14	11	Nil.		7	8
5—10 .....	20	11	34	24	2	2	3	6
10—15 .....	11	12	8	7				
15—20 .....	16	18	10	9	13	31	2	2
20—25 .....	24	29	2	14				
25—35 .....	35	37	8	7	45	40	7	1
35—45 .....	26	24	1	—				
45—55 .....	19	12	2	2	15	26	2	7
55—65 .....	9	7	1	4				
65 and over .....	6	7	1	1	2	8	1	—
	168	159	83	81	77	107	26	24
TOTALS .....	327		164		184		50	



2. INCIDENCE AND MORTALITY, 1926—1930.

The following table shows the total number of new cases notified and deaths registered for all ages during the past five years :—

	New cases notified.			Deaths.			Death rate per 1,000 of population.		
	Pulm.	Non-pulm.	Total.	Pulm.	Non-pulm.	Total.	Pulm.	Non-pulm.	Tuberc. in all forms.
1926	M. 152	70	222	86	25	111	0.59	0.16	0.75
	F. 188	77	265	104	27	131			
	340	147	487	190	52	242			
1927	M. 191	102	293	101	27	128	0.58	0.17	0.75
	F. 171	77	248	88	30	118			
	362	179	541	189	57	246			
1928	M. 146	75	221	89	35	124	0.55	0.19	0.74
	F. 157	52	209	87	25	112			
	303	127	430	176	60	236			
1929	M. 149	97	246	105	23	128	0.61	0.15	0.76
	F. 182	75	257	92	25	117			
	331	172	503	197	48	245			
1930	M. 168	83	251	77	26	103	0.57	0.16	0.73
	F. 159	81	240	107	24	131			
	327	164	491	184	50	234			

3. DISPENSARY CASES AND TREATMENT.

Table 1. on pages 78 and 79 gives details of the work done at or in connection with the Dispensaries at Norwich and King’s Lynn during the year.

The total number of new cases (including “ contacts ”) shown by this table to have been definitely diagnosed as tuberculous, represents an increase of 18 (from 379 to 397) as compared with the previous year. Adult male pulmonary cases increased from 87 to 116, females decreased from 124 to 107, whilst children increased from 40 to 45. On the other hand, non-pulmonary adult males decreased from 28 to 22, females increased from 24 to 29, and children increased from 76 to 78.

There were 2,098 cases on the Dispensary Register at the end of the year as compared with 1,966 at the beginning—an increase of 132. This was mainly due to a substantial increase in the number of cases under observation as

compared with the previous year (from 133 to 207) and a decrease in the number removed from the Register as "cured" (from 195 to 145) after completion of the Ministry's prescribed period of five years arrest of the disease in pulmonary cases and three years in non-pulmonary cases.

The decrease of adult male Institutional cases towards the end of 1929, which was mainly responsible for reducing the average number of patients treated to 176 as compared with 187 during the previous year, was not repeated during 1930. Table 2 (A) on page 80 shows that an average of 80 beds were occupied by adult males during the year, whilst the total average of occupied beds was 194. The corresponding figures for 1929 were 70 and 176 respectively. Similarly, the number of male adults receiving treatment at the end of the year, as shown in Table 2 (B) on page 80, represents an increase of 12 as compared with the previous year (from 64 to 76), whilst females had increased by 10 (37 to 47), making a total of 197 cases as compared with 156 at the end of the previous year.

Table 3 on page 81, gives in detail the results of Institutional treatment in the various classes of cases discharged from Sanatoria and Hospitals during the year. The figures for pulmonary cases show that the best results are obtained when Sanatoria treatment is given before the sputum becomes positive, the percentage of T.B.—cases discharged with the disease quiescent being 56.5 as compared with 16.7 for T.B.+ cases, Group I. (early disease), and 6.8 for Group II. (moderately advanced). No cases in Group III. (very advanced disease) were quiescent on discharge. Fortunately, with the exception of Group III. cases, there has been very little difficulty in getting patients admitted to Sanatoria, so that the treatment has been commenced within a comparatively short time of the Tuberculosis Officer's examination.

The need for further accommodation for advanced pulmonary and surgical cases is still urgent. In the former class, the provision of a shelter at home (when this is possible) only minimises the risk of infection and does not meet the need for skilled medical treatment and nursing. On the other hand, there is at present no special accommodation for these cases at Public Assistance Institutions.

Such cases as have had to be transferred to a Public Assistance Institution during the year or who were already inmates, have now all been brought under the supervision of the Tuberculosis Officers.

The Council's shelters, numbering 159, have again proved necessary and beneficial accessories to home treatment.

#### 4. COMPARATIVE ANALYSIS OF WORK DONE.

The Ministry's Comparative Analysis of the work done by Norfolk and other Counties during the year is not issued in time for the Annual Report. The Analysis on page 83 and 84 is therefore in respect of the year 1929.

As in previous years, the Norfolk figures are compared with those of three other Counties of approximately the same population, and with the general average of all County Councils, excluding London.

The figures from the Registrar General's Statistical Review show that the death rate from pulmonary as well as from all forms of tuberculosis, is still comparatively low in Norfolk. On the other hand, the percentage of new cases has risen to 229 as compared with 200 in the previous year, whilst the general average decreased by 15.



## 1. CASES ON DISPENSARY REGISTER.

Several of the items where the Norfolk figures are again comparatively high show that close co-operation continues between the General Practitioners and the Tuberculosis Officers. For example :—

- Item (a) Number of cases on the Dispensary Register per 100 on the Notification Register.
- „ (b) Number of new cases examined during the year per 100 deaths from tuberculosis.
- „ (d) Number of sputum examinations.
- „ (f) Number of consultations with the doctors at the patients' homes or otherwise.

The very high figure for home visits by the Tuberculosis Officers—Item (g)—is again accounted for by the fact that there are only two Dispensaries in Norfolk.

In three of the items, the Norfolk figures remain low, namely :—

- Item (c) Number of “contacts” examined. The corresponding percentage for 1928 however, was 30, so that this has been more than doubled during the twelve months. It is anticipated that the figure for 1930 will show a still further increase.
- „ (e) Number of X-ray examinations. This number has been found to be sufficient hitherto.
- „ (h) Home visits by Nurses. The Norfolk figure refers only to the visits of the District Nurses in special cases where their services were required. We have no whole-time Health Visitors for tuberculous patients. Most of the visiting is done by some 200 voluntary Visitors, and had their work been included, this would have meant a big increase in the Norfolk figure.

## 2. RESIDENTIAL TREATMENT.

### (a) All Forms of Tuberculosis.

It will be noticed that Norfolk had 72 beds available per 100 deaths from tuberculosis. This comparatively satisfactory position might have been still further improved if all the necessary accommodation for institutional cases could have been provided within the County, particularly surgical and advanced pulmonary cases.

### (b) Pulmonary Tuberculosis.

The percentage of pulmonary patients who stayed in institutions more than six months is again high. This does not necessarily mean that the disease was more severe in those cases, but it indicates that treatment was usually given as long as was required. In some cases, patients are allowed to stay longer than is actually necessary, owing to the unsatisfactory home conditions.

With regard to the classification of cases on admission, the figures for Class T.B. — (no tubercle bacilli in sputum), Class T.B. + (tubercle bacilli in sputum), Group I. (early) and Group II. (intermediate) are higher than the general average. Group III. (advanced), however, is low, mainly on account of lack of accommodation for this class of case. The Institutional figures

provide additional evidence as to the close co-operation between the General Practitioners and the Tuberculosis Officers, which enables so many patients to be examined before the disease has got beyond the early stage.

(c) **Non-Pulmonary Tuberculosis.**

The percentage of bones and joints cases is again low, but it represents an increase of 6 over the previous year, as compared with a general average increase of 1 only.

The number of gland cases is again high as compared with the other Counties. This is no doubt partly due to differences in interpretation of the Ministry's method of classification, which, particularly in the case of children, is not considered very satisfactory.

In general, the figures appear to indicate that our present Scheme is being utilised to its fullest capacity.

**5. DISPENSARY CASES, 1926—1930.**

The following table gives details of Dispensary cases and Institutional treatment during the past 5 years.

It is very satisfactory to note that 145 cases were removed from the Dispensary Register as "cured" during 1930.

**TABLE 4.**  
**TUBERCULOSIS SCHEME OF THE NORFOLK COUNTY COUNCIL.**

**Dispensary Cases, 1926—1930.**

			1926	1927	1928	1929	1930
No. of cases on	{ Pulm.	M.	383	444	490	542	508
		F.	314	378	448	509	502
		Ch.	179	198	223	251	255
			876	1020	1161	1302	1265

			1926	1927	1928	1929	1930
Dispensary Register on 1st January	{ Non-pulm.	M	79	83	103	107	116
		F	55	78	87	108	99
		Ch.	177	243	297	337	353
			311	404	487	552	568
	{ Doubt-ful	M	8	13	11	15	14
		F	18	23	21	18	15
		Ch.	91	122	106	92	104
			117	158	138	125	133
	{ TOTALS		1304	1582	1786	1979	1966



			1926	1927	1928	1929	1930
No. of New Cases added to Dispensary Register during the the year.	Pulm.	M	112	110	104	87	116
		F	133	113	122	124	107
		Ch.	39	48	53	40	45
			284	271	279	251	268
	Non-pulm.	M	13	21	15	28	22
		F	16	18	22	24	29
		Ch.	91	76	76	76	78
			120	115	113	128	129
	Doubtful	M	15	10	30	29	43
		F	27	19	22	21	50
		Ch.	109	85	81	123	132
		151	114	133	173	225	
TOTALS		555	500	525	552	622	
No. of Cases removed from Register as " Cured "	Pulm.	M	14	1	6	60	36
		F	5	3	7	45	42
		Ch.	—	1	1	9	9
			19	5	14	114	87
	Non-pulm.	M	9	2	7	26	18
		F	1	1	2	23	13
		Ch.	3	4	6	32	27
			13	7	15	81	58
	TOTALS		32	12	29	195	145
			152	152	138	156	165
Average No. of Institutional cases.	Pulm.	M	69	65	70	62	70
		F	36	39	43	44	42
		Ch.	29	31	32	34	38
			134	135	145	140	150
	Non-pulm.	M	12	12	9	7	9
		F	6	7	5	5	6
		Ch.	22	23	24	21	24
			40	42	38	33	39
	Doubtful	M	1	1	1	1	1
		F	1	1	—	—	1
		Ch.	6	2	3	2	3
		8	4	4	3	5	
TOTALS		182	181	187	176	194	

		1926	1927	1928	1929	1930
Total No. of Cases received Institu- tional Treatment	{ M	202	185	201	189	208
		143	132	150	148	146
		153	147	172	152	157
		498	464	523	489	511
Percentage of cases discharged with disease quiescent	{ Pulm.	42.2	35.6	42.2	40.1	29.9
	{ Non- pulm.	50.0	59.1	50.6	45.6	37.5

## 6. INSTITUTIONAL TREATMENT—QUIESCENT CASES 1925-30.

With a view to ascertaining the permanence or otherwise of the good results achieved by Institutional treatment in cases discharged with the disease quiescent, reports have been obtained in respect of as many of such cases as can be traced, who were discharged during the first five years' operation of the Council's Tuberculosis Scheme, namely, 1921-25. The results are as follows :—

	No. of “ quiescent ” Discharges.	Reports Received.	Disease still Quiescent.
1921	20	16	13 ( 6 “ cured ”)
1922	56	41	27 (15 do. )
1923	76	58	43 (20 do. )
1924	91	81	67 (40 do. )
1925	71	60	46 (18 do. )

Considering the bad housing and economic conditions to which so many of our patients have had to return after receiving Institutional treatment, the above figures would appear to be very satisfactory.

## 7. THE PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS) REGULATIONS, 1925.

Action was taken in two cases under Section 4 of the above regulations. This section prevents any person who is aware that he is suffering from tuberculosis of the respiratory tract from entering upon any employment or occupation in connection with a dairy which would involve the milking of cows, the treatment of milk, or the handling of vessels used for containing milk.

## 8. PUBLIC HEALTH ACT, 1925.

No action was taken under Section 62 during the year.



TABLE 1.

## TUBERCULOSIS SCHEME of the Norfolk County Council.

Return showing the Work of the Dispensaries during the year 1930.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY.				TOTAL.			
	Adults.		Children.		Adults.		Children.		Adults.		Children.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—NEW CASES examined during the year												
(including Contacts) :—												
* <i>(a)</i> Definitely tuberculous	108	97	26	15	21	28	48	20	129	125	74	35
<i>(b)</i> Doubtfully tuberculous	—	—	—	—	—	—	—	—	36	46	53	37
<i>(c)</i> Non-tuberculous	—	—	—	—	—	—	—	—	28	43	35	29
B.—CONTACTS examined during the year :—												
<i>(a)</i> Definitely tuberculous	8	10	3	1	1	1	5	5	9	11	8	6
<i>(b)</i> Doubtfully tuberculous	—	—	—	—	—	—	—	—	7	4	21	21
<i>(c)</i> Non-tuberculous	—	—	—	—	—	—	—	—	14	14	62	68
C.—CASES written off the Dispensary Register as												
<i>(a)</i> Cured	36	42	4	5	18	13	15	12	54	55	19	17
<i>(b)</i> Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)	—	—	—	—	—	—	—	—	70	96	128	123
D.—NUMBER OF PERSONS on Dispensary Register on December 31st :—												
<i>(a)</i> Diagnosis completed	535	496	150	109	134	113	207	147	669	609	357	256
<i>(b)</i> Diagnosis not completed	—	—	—	—	—	—	—	—	26	33	80	68

\*Includes 18 cases previously removed from the Register as "cured."





TABLE 2.

RESIDENTIAL INSTITUTIONS.

(A) AVERAGE NUMBER OF BEDS AVAILABLE FOR PATIENTS.  
DURING THE YEAR 1930.

		Pulmonary Tuberculosis			Non-Pulmonary Tuberculosis		Total.
		Observa- tion.	"Sana- torium" Beds.	"Hospital" Beds.	Disease of Bones and Joints.	Other Conditions.	
Adult Males	.....	1	66	4	9	—	80
Adult Females	.....	1	41	1	4	2	49
Children under 15	.....	3	38	—	13	11	65
Total	.....	5	145	5	26	13	194

(B) RETURN SHOWING THE EXTENT OF RESIDENTIAL TREATMENT  
DURING THE YEAR 1930.

			In Insti- tutions on Jan. 1.	Admitted during the year.	Discharged during the year.	Died in the Insti- tutions.	In Insti- tutions on Dec. 31.	
Number of Patients	{	Adults	M.	64	*140	116	12	76
		F.	37	101	80	11	47	
		Child- ren	M.	23	55	40	—	38
		F.	30	31	30	—	31	
No. of Observation Cases	{	Adults	M.	—	4	4	—	—
		F.	—	8	8	—	—	
		Child- ren	M.	—	8	5	—	3
		F.	2	8	8	—	2	
Total			.....	156	355	291	23	197

\* In addition, there were 4 admissions for artificial pneumo-thorax.

Return showing the immediate results of treatment of patients and of observation of doubtful cases discharged from Residential Institutions during the year 1930.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.												TOTAL.
			Under 3 months.			3—6 months.			6—12 months.			More than 12 months.			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Class T.B. minus. Group 1.	Quiescent	.....	3	1	1	7	10	3	1	5	10	3	1	8	53
	Improved	.....	7	—	—	2	2	2	5	2	2	—	—	3	25
	No material improvement	.....	2	3	—	1	1	—	1	—	1	—	—	—	9
	Died in Institution	.....	1	1	—	—	2	—	1	—	—	—	—	—	5
Class T.B. plus Group 2.	Quiescent	.....	—	1	—	1	1	—	—	2	—	—	—	1	6
	Improved	.....	—	2	—	7	3	—	3	1	—	2	—	—	18
	No material improvement	.....	2	2	—	—	1	—	1	1	—	—	1	—	8
	Died in Institution	.....	1	1	—	1	—	—	—	—	—	1	—	—	4
Class T.B. plus Group 3.	Quiescent	.....	1	—	—	1	—	—	2	1	—	—	—	—	5
	Improved	.....	6	2	—	9	2	—	5	3	—	4	4	—	35
	No material improvement	.....	5	4	—	4	3	—	1	4	—	2	2	—	25
	Died in Institution	.....	1	2	—	1	—	—	2	—	—	1	1	—	8
Class T.B. plus. Group 3.	Quiescent	.....	—	—	—	—	—	—	—	—	—	—	—	—	—
	Improved	.....	—	—	—	—	—	—	1	1	—	—	—	—	2
	No material improvement	.....	3	1	—	2	—	—	—	—	—	—	1	1	8
	Died in Institution	.....	1	2	—	—	1	—	—	—	—	1	—	—	6

PULMONARY TUBERCULOSIS.



TABLE 3—continued.

Bones and Joints.	Quiescent or Arrested .....	—	2	1	1	1	—	—	—	—	—	—	—	—	6
	Improved .....	5	3	2	—	—	—	—	1	—	—	—	—	—	13
	No material improvement	1	—	1	—	—	—	—	—	—	—	—	—	—	5
	Died in Institution .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Abdominal.	Quiescent or Arrested .....	—	3	—	1	—	—	1	—	—	1	—	—	2	8
	Improved .....	—	2	—	—	1	—	—	—	—	—	—	—	—	5
	No material improvement	—	1	—	—	—	—	—	—	—	—	—	—	—	1
	Died in Institution .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Non-PULMONARY TUBERCULOSIS.	Quiescent or Arrested .....	—	1	—	—	—	—	1	—	—	—	—	—	—	4
	Improved .....	4	2	—	—	—	—	—	—	—	—	—	—	—	6
	No material improvement	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Died in Institution .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Peripheral Glands.	Quiescent or Arrested .....	2	2	—	—	—	—	—	—	—	2	—	—	3	9
	Improved .....	1	7	3	—	—	—	—	—	—	1	—	—	1	13
	No material improvement	—	2	—	—	—	—	—	—	—	—	—	—	—	2
	Died in Institution .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Observation for purpose of diagnosis.	Tuberculous .....	Under 1 week.	1—2 weeks.			2—4 weeks.			More than 4 weeks.			7
			—	—	—	—	—	—	2	1	3	
			—	2	—	—	—	—	2	3	2	
			—	1	3	—	—	2	—	1	1	
Non-tuberculous .....	Doubtful .....	—	—	—	—	—	—	—	—	—	—	9
			—	—	—	—	—	—	—	—	—	9
			—	—	—	—	—	—	—	—	—	9

EXTRACT from the MINISTRY'S MEMO 131C/T showing COMPARATIVE ANALYSIS of WORK DONE  
by NORFOLK and OTHER COUNTIES with approximately the same population during the year 1929

	NORFOLK.	YORKS (N.)	CORNWALL.	WORCESTER- SHIRE.	ALL COUNTY COUNCILS (excluding London).
From Registrar General's Statistical Review.					
Estimated Mid-year Civilian Population .....	322,990	323,340	317,500	308,510	20,079,990
Death rate from Pulmy. Tub. per million population	610	553	693	645	650
Death Rate from Tub. (all forms) per million population .....	759	748	901	810	804
From Notification Registers.					
Total No. of new cases of Tub. recorded during year per 100 Tub. deaths .....	229	213	128	226	197
From Returns Relating to Dispensary Work.					
(1) Cases on Dispensary Register.					
(a) No. of cases of Tub. on Dispensary Register on 31st December per 100 on Notification Register .....	76	49	40	78	61
(b) No. of "new cases" examined by T.O's during year per 100 deaths from Tuberculosis .....	254	239	200	212	267
(c) No. of "contacts" examined by the T.O's during the year per 100 deaths from Tuberculosis .....	69	113	72	172	122
(d) No. of sputum examinations per 100 "new cases" examined and "contacts" .....	62	16	54	32	55
(e) No. of X-ray examinations per 100 "new cases" and "contacts" examined .....	11	0.6	18	11	21
(f) No. of consultations (at homes or otherwise) per 100 deaths from Tub. ....	365	246	303	182	307
(g) No. of other home visits by T.O's per 100 deaths from Tuberculosis .....	1,475	123	233	800	260
(h) No. of home visits by Nurses or full-time Health Visitors per 100 patients on the Dispensary Register on 31st					



December (the Norfolk figures do not include the visits of some 200 Voluntary Visitors)      .....      76      175      337      629      328

2. Residential Treatment.

(a) **All Forms of Tuberculosis.**  
Average No. of beds available per 100 Tuberculosis deaths      .....      72      50      26      50      59  
Total No. of Patients treated, *i.e.*, excluding observation cases per 100 Tuberculosis deaths      .....      129      81      51      136      106  
Percentage of all Patients treated who were Pulmonary cases      .....      78.5      72.2      84.1      78.5      82.4

(b) **Pulmonary Tuberculosis.**  
Percentage of Pulmonary patients who stayed over 6 months      .....      43.8      36.9      21.3      13.6      30.0  
Percentage of Pulmonary Patients who were adults      .....      80.3      77.2      96.7      86.5      88.0  
Percentage of Pulmonary patients who were classified on admission as :—  
CLASS T.B. — (No tub. bacilli in sputum)      43.0      58.4      33.6      53.0      39.1  
CLASS T.B. + (Tub. bacilli in sputum) :—  
Group I. (early disease)      .....      14.9      13.4      5.7      7.9      11.4  
Group II. (intermediate)      .....      32.5      25.5      43.3      32.0      30.7  
Group III. (advanced disease)      .....      9.6      2.7      16.4      7.1      18.8

(c) **Non-Pulmonary Tuberculosis.**  
Percentage of non-pulmonary patients who were children      .....      55.9      56.8      43.5      49.3      57.1  
Percentage of non-pulmonary patients classified on admission as suffering from Tuberculosis of the :—  
Bones and Joints      .....      48.5      75.0      65.2      64.4      54.4  
Abdomen      .....      17.6      6.8      4.4      12.3      17.4

**NUMBER OF BEDS AVAILABLE FOR THE TREATMENT OF TUBERCULOSIS ON THE 31st, DECEMBER, 1930, IN POOR LAW INSTITUTIONS BELONGING TO THE COUNCIL (OR TO THE CONSTITUENT AUTHORITIES OF THE JOINT COMMITTEE).**

Name of Institution.	For PULMONARY cases.		For NON-PULMONARY cases.		TOTAL.
	Adults.	Children under 15	Adults.	Children under 15	
Gressenhall .....	2 Shelters	(one bed each)			2
Downham .....	—	—	—	—	Nil
King's Lynn .....	2	—	1	—	3
Aylsham .....	4	—	—	—	4
Freebridge Lynn	1 Shelter	(one bed)			1
Swainsthorpe .....	1	do.	do.	1	2
Walsingham .....	2 Shelters	(one bed each)			2
Thetford .....	1	—	—	—	1
Wicklewood .....	—	—	—	—	Nil
Lingwood .....	1 Shelter	(one bed)	1	—	2
Loddon and Clavering	3 Shelters	(one bed each)			3
Wayland .....	1 Shelter	(one bed)	—	—	1
Pulham Market	—	—	—	—	Nil
West Beckham	2	—	—	—	2

**Return showing the Extent of Residential Treatment provided during the year in Poor Law Institutions for persons chargeable to the Council (or to the Constituent Authorities of the Joint Committee).**

		In Institutions on January 1st	Admitted during the year	Discharged during the year	Died in the Institution.	In Institutions on Dec. 31st.
Number of patients suffering from pulmonary tuberculosis admitted for treatment	Adult Males	2	6	2	1	5
	Adult Females	6	5	—	6	5
	Children	—	2	—	1	1
	TOTAL	8	13	2	8	11
Number of patients suffering from non-pulmonary tuberculosis admitted for treatment	Adult Males	1	1	—	—	2
	Adult Females	1	1	—	—	2
	Children	1	—	—	—	1
	TOTAL	3	2	—	—	5
GRAND TOTAL		11	15	2	8	16



## **BLIND PERSONS' ACT, 1920.**

### **Register.**

On the 31st December, 1930, there were 496 registered blind persons in the County as compared with 457 on the corresponding date last year.

During the year, 67 new cases were examined by Ophthalmic Specialists and 37 by General Practitioners. New glasses were provided or alterations made to spectacles in 70 cases.

There were 60 cases on the Supplementary Register and 75 on the Prevention Register. The Supplementary cases mainly consist of registered cases who have received operative treatment after which they have been certified not to be blind within the meaning of the Act; whilst Prevention cases consist of those who have been certified not blind within the meaning of the Act, at the first examination.

### **Training.**

Training cases, from the age of 16 years, continue to be sent to the Royal School for the Blind, Leatherhead, and the Norwich Institution for the Blind, financial responsibility being accepted by the Education Committee. At the end of the year there were 7 cases in training at these Institutions. Blind children of School age are still sent to the East Anglian School for the Blind, Gorleston, under the Education Committee's Scheme.

### **Home Teaching and Visiting.**

Periodical visits are paid by the Home Teachers to all the cases on the three registers. Both Home Teachers hold the Certificate of the College and Association of Teachers of the Blind.

4,558 visits were made during the year in comparison with 1,257 last year.

At the end of the year 15 blind persons were receiving instruction in embossed reading (Braille and Moon), knitting, cane and rush chair seating, basketry, rug work and hearth-rug making.

There are 20 Voluntary Visitors on the register all of whom take great interest in the cases in their respective areas.

In one case, a female aged 58 years, was supplied with an invalid chair. This woman was a sufferer from hernia and unfit for operation.

### **Wireless.**

During the year, 75 wireless sets were supplied by the "Wireless for the Blind Fund," for distribution in the County; these have been greatly appreciated by the recipients in each case. The set is provided free of cost on the understanding that no financial responsibility for upkeep can be accepted by the County Council.

33 further applications for one valve sets and 10 applications for loud speakers have been received and the "Wireless for the Blind Fund" has promised to supply these in due course.

Employable Blind.

There are 13 Home workers registered, this being the same number as the previous year. This number includes : hand and machine knitters ; basket makers ; chair seaters ; piano tuners ; a boot repairer and brush maker ; the weekly earnings of whom are augmented. One Home Worker executed an order for a model of " Shamrock V." to be exhibited and sold at the National Institute. One registered blind person gained a First, two Seconds, and three Third prizes for vegetables at the Chelsea Show, whilst another gained a prize at the same show for Flowers and three at the National Rose Show. Both of these are members of the Guild of Blind Gardeners.

The Piano Tuner has had his three year's contract renewed through the Norfolk Education Committee for the tuning of School pianos in the South-East section of the County and the Brush Maker has had frequent orders from the County Surveyor for the supply of scavenger brooms.

Maintenance Allowances.

At the end of the year there were 160 registered blind persons in receipt of maintenance allowances ranging from 1/- to 25/- weekly, in accordance with the Committee's provisional scale, particulars of which are given below :—

- (a) Income of a blind person living alone made up to 18/- per week.
- (b) Income of a blind person living with relatives made up to 15/- per week.
- (c) Income of a married couple, one blind, made up to 25/- per week.

Early in 1931, this scale was revised as follows :—

1st April to 30th September.				1st October to 31st March.			
(a)	Up to 17/-	.....	.....	.....	.....	.....	19/-
(b)	Up to 14/-	.....	.....	.....	.....	.....	16/-
(c)	Up to 24/-	.....	.....	.....	.....	.....	26/-

This gives the blind persons a larger allowance during the period when they have the greatest expense, *i.e.*, the Winter Months, and yet does not increase the cost to the County.

The Committee has retained power to vary the scale in cases of exceptional circumstances.

The following Tables give particulars of cases on the Register at the end of the year :—

TABLE I.  
TOTAL BLIND POPULATION.  
Distributed according to age periods.

0—4	5—15	6—19	20—29	30—39	40—49	50—59	60—69	70 & over	Unknown
2	18	5	24	39	41	64	115	178	10

TOTAL :—496.



## Distributed according to age at which blindness occurred.

0—1	2—5	6—15	16—20	21—25	26—50	51—70	71 & over	Unknown
68	11	24	17	13	99	150	41	73

TOTAL :—496.

TABLE II.

**Total number of Blind Persons over 60 years on the Register distributed according to Employability.**

Trained but Unemployed.	Under Training.	No Training but Trainable.
6	7	1

Workshops.	Employed Home Workers.	Elsewhere.	TOTAL.
9	13	Nil	22

### Unemployables.

**Total number of Defectives on Register, December 1930.**

(a) Mental.	(b) Physical.	(c) Deaf.	(d) Combinatons of a, b, c.	TOTAL.
18	82	27	16	143

## PREVENTION OF BLINDNESS.

This of course is the main aspect of the whole question and endeavours have been made to obviate the risk of blindness as far as possible.

### PRE-SCHOOL AGE.

The incidence of Ophthalmia Neonatorum is very low. All cases are followed up under the Maternity and Child Welfare Scheme and none were found to have impaired vision. Any apparent defect in vision noted by Health Visitors and District Nurses is reported to me and any necessary action taken. During the year six children were treated and in all cases improvement has been noted.

### SCHOOL CHILDREN.

Treatment in the main is carried out under the Education Committee's Scheme and cases where this is not applicable are treated under the Public Health Act, 1925.

ADULTS.

Practically all these cases are brought to my notice by the Home Teachers. Arrangements are made for examination by Ophthalmic Surgeons in all cases where the patients are able to travel. Others are reported upon by their respective medical practitioners. Glasses are provided when recommended, either free of charge or at contract prices according to financial circumstances.

Any other form of treatment advised by the medical attendant (*e.g.*, dental treatment, provision of trusses, etc.) is carried out by the County Council.

VENEREAL DISEASES.

Under the Public Health (V.D.) Regulations of 1916, clinics and treatment centres have been established at the Norfolk and Norwich Hospital and the West Norfolk and Lynn Hospital. Sessions are held at both clinics on Tuesdays and Fridays at stated hours for each sex.

Intermediate treatment is carried out daily at both hospitals at stated hours.

220 new patients from the Administrative County were treated during the year 1930, as follows :—

Clinic.	Syphilis.	Gonorrhoea.	Other than V.D.	Soft Chancre.	Total.
Norfolk & Norwich Hospital	33	96	9	—	138
West Norfolk and Lynn Hospital	32	31	19	—	82

This is an increase of 35 cases compared with the number of new cases treated during 1929.

The following table shows the total attendances made by Norfolk patients at each clinic during the past 5 years :—

Year.	Norwich.	King's Lynn.
1930	2,066	1,086
1929	2,229	909
1928	2,325	394
1927	1,998	432
1926	1,985	176

Pathological examinations were made as follows during 1930 :—

For Wasserman Reaction	.....	.....	.....	313
„ Spirochetes	.....	.....	.....	14
„ Gonococci	.....	.....	.....	434
„ Other Organisms	.....	.....	.....	17
TOTAL	.....	.....	.....	778

SALE OF FOODS AND DRUGS ACTS.

The two Inspectors of Weights and Measures act as part-time sampling officers, examinations being undertaken by the County Analyst.



During the year 626 formal samples and 3 informal samples were submitted. Details of these, together with the action taken by the Council are given in the following Table :—

Article.	No. of Samples examined.	No. found genuine.	No. adulter- ated.	Action taken	
				Prosecution ordered.	Cautioned.
Milk .....	480	396	84	29	26
Full Cream Condensed Milk (Sweetened) .....	3	3	—	—	—
*Butter .....	56	56	—	—	—
Evaporated Milk (unsweetened)	2	2	—	—	—
Lard .....	3	3	—	—	—
Shredded Suet .....	6	6	—	—	—
Tongue and Ham Paste .....	1	1	—	—	—
Chicken, Ham and Tongue Paste .....	1	1	—	—	—
Chicken and Ham Paste .....	1	1	—	—	—
Mincemeat .....	2	2	.....	.....	.....
Marmalade .....	3	3	—	—	—
Crab Apple Jelly .....	1	1	—	—	—
Honey .....	4	4	—	—	—
Raspberry Jam .....	1	1	—	—	—
Banana Cream .....	1	1	—	—	—
Lemon Curd .....	1	1	—	—	—
Plum Jam .....	1	1	—	—	—
Cheese Cake Mixture .....	1	1	—	—	—
Baking Powder .....	4	4	—	—	—
Arrowroot .....	1	1	—	—	—
Fancy Cake .....	1	1	—	—	—
Mixed Fruits .....	1	1	—	—	—
Cocoa .....	2	2	—	—	—
White Pepper .....	7	6	1	—	1
Orang Curaco .....	1	1	—	—	—
Ginger Brandy (non-alcoholic)	1	1	—	—	—
Fruit Wine .....	1	1	—	—	—
Ginger Wine .....	2	2	—	—	—
Raisin Wine .....	2	1	1	1	—
Brandy .....	1	1	—	—	—
Whisky .....	4	4	—	—	—
Rum .....	2	2	—	—	—
Separated Milk .....	1	1	—	—	—
Meat Paste .....	1	1	—	—	—
Gelatine Ham & Tongue .....	1	1	—	—	—
Lunch Tongue .....	1	1	—	—	—
Pork Pie .....	1	1	—	—	—
Golden Syrup .....	1	1	—	—	—
Strawberry Jam .....	1	1	—	—	—
Jam Sponge Sandwich .....	1	1	—	—	—
Malt Vinegar .....	4	4	—	—	—
Florence Cream .....	1	1	—	—	—
Black Currant Wine (non- alcoholic) .....	1	1	—	—	—
Compound Liquorice Powder	3	3	—	—	—
Easton's Syrup .....	4	4	—	—	—

Article.		No. of Samples examined.	No. found genuine.	No. adulter- ated.	Action taken	
					Prosecutions ordered.	Cautioned.
Easton's Syrup Tablets	.....	1	1	—	—	—
Dripping	.....	1	1	—	—	—
Sausages	.....	1	1	—	—	—
Breakfast Tongue.....	.....	1	1	—	—	—
Ginger Marmalade	.....	1	1	—	—	—
Lemon Cheese	.....	1	1	—	—	—
Self Raising Flour	.....	1	1	—	—	—
Mixed Spice	.....	1	1	—	—	—
Tea	.....	1	1	—	—	—
Boric Ointment	.....	1	1	—	—	—
TOTAL	.....	629	543	86	30	27

\* Three of these were informal samples.

### CAUSES OF AND AGES AT DEATH IN 1930 IN THE ADMINIS- TRATIVE COUNTY OF NORFOLK.

		YEARS.									Total all ages.
CAUSE OF DEATH	Ages	0-	1-	2-	5-	15-	25-	45-	65-	75-	
Enteric Fever	.....	—	—	—	—	—	—	—	—	—	—
Smallpox	.....	—	—	—	—	—	—	—	—	—	—
Measles	.....	1	3	2	6	—	—	—	—	—	12
Scarlet Fever	.....	—	—	—	—	—	—	—	—	—	—
Whooping Cough	.....	6	2	3	2	—	—	—	—	—	13
Diphtheria	.....	—	1	3	12	—	—	—	—	—	16
Influenza	.....	1	—	1	2	—	4	5	10	9	32
Encephalitis lethargica	.....	—	—	—	—	—	—	4	—	—	4
Meningococcal meningitis	.....	1	—	—	—	—	—	—	—	—	1
Tuberculosis of the Respiratory system	.....	—	—	—	4	44	85	41	7	3	184
Other tuberculous Diseases	.....	4	6	9	9	4	8	9	1	—	50
Cancer, Malignant Disease	.....	—	—	1	—	2	28	188	195	124	538
Rheumatic Fever	.....	—	—	—	4	1	—	3	1	—	9
Diabetes	.....	1	—	—	2	2	5	17	25	11	63
Cerebral Hæmorrhage, etc.	.....	—	—	—	—	—	2	32	65	104	203
Heart Disease	.....	—	—	—	—	5	20	143	252	379	799
Arterio-sclerosis	.....	—	—	—	—	—	—	23	64	162	249
Bronchitis	.....	6	2	1	—	—	—	8	32	109	158
Pneumonia (all forms)	.....	14	12	1	1	2	22	40	27	31	150
Other Respiratory Diseases	.....	1	—	2	1	—	3	11	15	11	44
Ulcer of Stomach or Duodenum	.....	—	—	—	—	—	2	14	3	1	20



Diarrhoea, etc. ....	15	2	1	—	—	2	1	3	2	26
Appendicitis and Typhlitis ....	—	—	1	1	2	1	7	4	—	16
Cirrhosis of Liver ....	—	—	—	—	—	2	1	3	2	8
Acute and Chronic Nephritis ....	—	—	1	3	1	9	25	38	22	99
Puerperal Sepsis ....	—	—	—	—	2	6	—	—	—	8
Other Accidents and Diseases of Pregnancy and parturition ....	—	—	—	—	1	9	—	—	—	10
Congenital Debility & Malformation, Premature Birth ....	139	3	—	1	—	—	—	—	—	143
Suicide ....	—	—	—	—	3	10	15	4	1	33
Other Deaths from Violence ....	3	2	5	14	13	21	34	13	18	123
Other Defined Diseases	39	8	11	18	17	46	133	117	310	699
Causes Ill-defined or Unknown ....	—	—	—	—	—	1	2	3	1	7
All Causes ....	231	41	42	80	99	286	756	882	1300	3717

### INFECTIOUS DISEASES.

The following Table gives particulars of notifications of infectious diseases and the number of deaths during 1930 :—

Disease.	No. of cases notified.	Deaths as given by Registrar General.
Smallpox .....	2	—
Scarlet Fever .....	413	—
Diphtheria .....	284	16
Enteric Fever .....	25	—
Pneumonia .....	151	150
Puerperal Fever .....	16	8
Puerperal Pyrexia .....	52	10
Polio-Myelitis .....	3	—
Polio-Encephalitis .....	2	—
Encephalitis Lethargica .....	5	4
Ophthalmia Neonatorum .....	12	—
Erysipelas .....	108	—
Tuberculosis (Pulmonary) .....	296	184
„ (Non-Pulmonary) .....	184	50
Malaria .....	1	—
Dysentery .....	8	—
Cerebro-Spinal Meningitis .....	2	—
Psittacosis .....	1	—
Anthrax .....	1	—
Whooping Cough .....	1	13
Chicken Pox .....	218	—
Measles .....	8	12
	1793	447

During the year one case of Psittacosis was notified, the first to occur in the County. It was a typical case of infection by parrots, with typhoidal-pneumonic symptoms. Arrangements were made for every precaution to be observed at the patient's house and fortunately she made a good recovery.

Two cases of Smallpox occurred during the year. One at King's Lynn. The patient, a girl of 14, was removed to the Smallpox Hospital on August 7th. She progressed satisfactorily, and was discharged on September 12th. The other case occurred at Thetford. The patient, a man of 30, was removed with his wife and three children to the Thetford Smallpox Hut on December 9th. I saw him in company with his doctor and the District Medical Officer of Health on that day and again on December 12th. The case was diagnosed as one of modified smallpox. In both cases arrangements were made for all contacts to be vaccinated and the necessary steps taken to prevent any spread of the infection.

### MINISTRY OF HEALTH INQUIRIES.

Ministry of Health inquiries regarding applications for loans, etc., in connection with matters affecting the Public Health of the County have been held as follows since 1st January, 1930 :—

Authority.	Date.	Place.	Purpose of Inquiry.	Amount of Loan applied for.
Forehoe R.D.C.	16th July, 1930	Wymondham	Sewerage and sewage disposal	£38,000
Wells-next-Sea U.D.C.	3rd Jan., 1930	Wells-next-Sea	Water Supply	£14,000
E. & W. Fleggs	13th Dec.	East Caister	Sewerage	£800
			Sewerage and sewage disposal	£18,500









